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Summary of Increased Cost of Living, July, 1914, to June, 1919.

By HUGH S. HANNA.

A CAREFUL analysis of existing data indicates that the increased cost of living in the United States, by six-month periods, from the beginning of the European War in July, 1914, to June, 1919, has been as indicated in the table below. The table presents figures for (1) the shipbuilding centers, where industry was most stimulated and population most congested, with a consequent tendency to price raising; (2) other cities, both large and small; and (3) the country as a whole. A detailed explanation of the manner in which the data presented were arrived at is given in the following pages.

PER CENT OF INCREASE IN COST OF LIVING SINCE JULY, 1914.

Month and year.	18 shipbuilding centers.	Other cities and towns.	Country as a whole (excluding agricultural communities).
December, 1914.....	2	2	2
June, 1915.....	2	2	2
December, 1915.....	3	3	3
June, 1916.....	9	9	9
December, 1916.....	17	17	17
June, 1917.....	30	27	28
December, 1917.....	44	39	41
June, 1918.....	60	53	56
December, 1918.....	76	67	72
June, 1919.....	80	70	75

Since June, 1919, there are no figures of comparable accuracy with those of preceding dates. It seems clear, however, from the existing data that cost of living continued to rise. Thus the National Industrial Conference Board survey for July shows a rapid rise in July after a decline in the spring. Retail food prices of the United States Bureau of Labor Statistics show an increase of 3 per cent on July 15 over June 15 and of 1 per cent on August 15 over July 15. The Bureau of Labor Statistics' wholesale price index shows a sharp rise in July over June. The Annalist wholesale food index figures (averaged for the month) show an increase of about 1 per cent for July over June and of one-half of 1 per cent for August over July. Bradstreet's index number shows an increase of 4.4 per cent on

July 1 over June 1 and of 5.9 per cent on August 1 over July 1. Dun's index number of wholesale prices shows a similar result.

In view of these indications it would appear that the general cost of living increased approximately 3 percentage points in August as compared with June. On the other hand, it is of interest to note that the Annalist wholesale food index number showed a decline in the latter part of August and the first week of September.

Data Upon Which Above Estimates are Based.

The determination of changes in the cost of living, to be at all accurate, must be based upon the retail costs of the various items entering into the ordinary family budget, weighted according to the importance of such items in the budget. This includes house rent, sickness expenses, amusements, and other more or less intangible things, as well as actual commodities, such as food and clothing. For this reason prices of commodities, as the term is usually used, whether wholesale or retail, do not constitute a complete index of cost of living. Thus prices of food, fuel, and clothing may go up 100 per cent, but if rent and sundries (which take about one-third of the average family's income) advance, say, only 10 per cent, the real increase in cost of living will be less than 70 per cent.

Retail prices of food offer a good guide to changing living costs, but can not be taken as conclusive, as food is only one item, although an important one, in the family budget.

Wholesale prices offer a very unsatisfactory guide to living costs. Experience has shown that during a period of rapidly rising prices, such as has occurred during the past five years, wholesale prices tend to increase considerably more rapidly than retail prices. There are two evident reasons for this: First, the retailer often buys on contract for future delivery, and, second, the retailer is often unable to shift the increased wholesale cost immediately to the consumer. Thus, in a period of increasing prices, retail prices—and it is at retail that the average consumer buys—tend to lag behind wholesale prices. Ultimately retail prices will show somewhat the same total increase as wholesale prices, but, on any particular date, in a period of generally increasing prices, wholesale prices may be several points in advance of retail prices.

Moreover, the existing data regarding wholesale price movements are not entirely satisfactory. There are five well-known index numbers of such prices—Bradstreet's, Dun's, the Annalist's, Gibson's, and the United States Bureau of Labor Statistics. These are based on different groupings of commodities and are by no means identical in their results.

Comprehensive studies of cost of living, of the character mentioned above, are only two in number: (1) Cost-of-living survey of 18 ship-

building centers from December, 1914, to June, 1919, made by the United States Bureau of Labor Statistics, and supplemented by a country-wide cost-of-living survey, covering (a) 13 large non-shipbuilding centers from December, 1917, to June, 1919, and (b) 66 additional cities, mostly of smaller size, from December, 1917, to December, 1918; and (2) cost-of-living survey of the National Industrial Conference Board.

In the Bureau of Labor Statistics' surveys, detailed expenditures over a year's time were obtained from several hundred families in each community. From these were determined the relative importance of each article in the list of expenditures. The local retail prices were then obtained and weighted according to their importance in the budget, for December of each of the years 1914, 1915, 1916, 1917, 1918, and for June, 1919.

In the cost-of-living survey of the National Industrial Conference Board the prices obtained were similarly weighted, the results of previous investigations being used for this purpose. In obtaining retail food prices the board used those published by the United States Bureau of Labor Statistics. For other items it obtained prices direct from the localities, mostly by correspondence. Its original investigations covered the months of July, 1914, June and November, 1918, and March and July, 1919.

The making of cost-of-living surveys, such as those just listed, is very laborious. It means collecting prices of food, clothing, house furnishings, house rents, etc., from a large number of dealers in a large number of localities. As a result, such price collecting has been done only at considerable intervals and for a more or less limited number of communities. Thus there is no complete series of figures showing changes in cost of living for all communities and at short intervals. Therefore, in attempting to arrive at a complete series of figures showing changes in cost of living during the period, July, 1914, to date, the best that can be done is to combine and analyze the existing data and to seek to reconcile conflicting findings and fill in lacking data as well as possible.

The paramount difficulty is that, during the past few years, there has been considerable lack of uniformity in the increasing cost of living in different cities and different sections. From 1914 to date, every community of which there is record shows a very substantial increase, but the percentages were by no means the same. Thus, from December, 1914, to June, 1919, the increase in the 18 shipbuilding centers varied from 65 per cent in Los Angeles, Calif., to 87 per cent in Norfolk, Va.

This fact explains in some part the different results obtained by different investigations. Thus, not infrequently the statement is made that the cost of living has increased 100 per cent since the war

began. This may well be true for certain communities or certain groups of families; while for other communities and other groups of families the increase may have been very much less.

Because of these wide variations between communities, it might very well be contended that each community, or at least each group of similar communities, must be dealt with separately and that there can be derived no average for the country as a whole which is not a mere abstraction. This is perfectly true, and for certain purposes such as local wage adjustments, cost-of-living data may be completely satisfactory only when they are based on investigations in the particular locality. Nevertheless, for other purposes, such as wage adjustments on a national basis, there is imperative need of, and much practical usefulness in, so combining the local experience as to produce an average for the country as a whole. But, just because such an average is a combination of greatly varying elements, it is highly important that the basic data be thoroughly representative—that, in other words, original data be obtained from a large number of communities of diverse character.

Increase in Cost of Living from July, 1914, to December, 1914.

No very precise information exists regarding this period, the Bureau of Labor Statistics' comprehensive studies not beginning until December, 1914, and the National Industrial Conference Board's study jumping (as far as regards original investigations) from July, 1914, to June, 1919.

The available information, therefore, is limited to retail food prices of the United States Bureau of Labor Statistics and the wholesale price index numbers of Bradstreet, Dun, etc. These show that from July to December, 1914, retail food prices increased 3 per cent and wholesale prices of all commodities, according to Bradstreet and Dun, increased 4 per cent, while Gibson's index number gives an increase of 7 per cent, the *Annalist* an increase of only 1 per cent, and the United States Bureau of Labor Statistics' index shows a decrease. In view of this evidence, and giving chief weight to the retail food prices, it appears that the increase in cost of living from July to December, 1914, did not exceed 3 per cent, and was probably less, inasmuch as rent and several other items in the family budget probably did not increase at all during this period. Therefore, a liberal estimate of increase in cost of living between these two dates would be 2 per cent, and this figure has been accepted in the present study.

Increase in Living Cost from July, 1914, to July, 1919.

The Bureau of Labor Statistics' study for 18 shipbuilding centers shows an average increase in cost of living for these cities of 77 per cent from December, 1914, to June, 1919. As there was approxi-

mately a 2 per cent increase from July to December, 1914 (as computed in the preceding paragraph), this would mean a total increase of about 80 per cent from July, 1914, to June, 1919. The National Industrial Conference Board's study shows an increase of 71 per cent from July, 1914, to July 1, 1919. An analysis of these two findings indicates they are not so far apart as they might seem at first sight.

Of the two studies, that of the Bureau of Labor Statistics was unquestionably done with the greater thoroughness and accuracy. However, this particular study of the Bureau covered only shipbuilding centers, where all the evidence points to the fact that the price increases, owing to extraordinary industrial activity and population congestion, were greater than in other communities. The board's study covered most of the shipbuilding cities but in addition included a number of smaller and industrially less active cities where price and rent increases were, on the whole, probably less marked. This in itself would tend to make the average arrived at by the Conference Board's study for the whole country (namely 71 per cent from July, 1914, to July, 1919) less than the average of the 18 shipbuilding centers (namely 80 per cent for substantially the same period).

Supporting evidence on this point may be derived from the Bureau of Labor Statistics' two supplementary cost-of-living surveys for other than shipbuilding cities—namely, for 13 large cities from December, 1917, to June, 1919, and for 66 cities, mostly of smaller size, from December, 1917, to December, 1918. The periods covered by these supplementary studies were too short to permit of direct conclusions regarding the course of cost-of-living figures for these two groups of cities during the five years covered by the shipbuilding study and the Conference Board's study. The data, however, are sufficient not only to indicate that the increase in the cost of living in the shipbuilding centers was greater than in these two other groups of cities but also to indicate, with some precision, the degree in which it was greater. This is brought out in the following table which compares the results of the two supplementary studies with the results of the original survey of the 18 shipbuilding centers for the limited period for which they are comparable:

Locality.	Per cent of increase over December, 1917, at—	
	December, 1918.	June, 1919.
18 shipbuilding cities.....	22	25
13 other large cities.....	19	22
66 additional cities.....	18	.....

Two points are to be noted in this table: First, that from December, 1917, to December, 1918, the rapidity of increase in cost of living was but little greater in group 2 (the 13 large cities, not shipbuilding centers) than in group 3, which covered 66 additional cities, most of which are of small size—the full percentages being 18.59 and 18.14, respectively. Either of these groups may therefore be taken as fairly representative of conditions in the country outside the shipbuilding centers. Second, that in the shipbuilding centers the increase in cost of living for the period shown was more rapid than in the other towns and cities. Thus commodities which, in December, 1917, cost \$100, would cost in December, 1918, about \$122 in the shipbuilding centers and only \$118 to \$119 in other cities and towns; and in June, 1919, would cost about \$125 in the shipbuilding centers and only about \$122 in other cities and towns. This indicates a rapidity of increase in the nonshipbuilding centers less by about 12 per cent than in shipbuilding communities.

On the other hand, as the great stimulus to shipbuilding did not begin until 1917 it may be assumed that prior to 1917 the increase in living cost was no greater in the actual or potential shipbuilding communities than in other communities. Assuming, therefore, that up to the end of 1916 increases in living costs were the same in both groups of communities and that thereafter the increase was 12 per cent less in nonshipbuilding centers, it would appear that from December, 1914, to July, 1919, the total increase in cost of living in nonshipbuilding communities was approximately 70 per cent as against 80 per cent for the shipbuilding centers. The same method, of course, can be applied to the intervening years.

Thus are developed two series of cost-of-living increase figures based on the investigations of the United States Bureau of Labor Statistics—one applying only to shipbuilding centers, and the other, lower by 12 per cent, applying to other urban communities. For the strictly agricultural communities there is no information available.

A further step may be made by combining the two series of figures thus developed in order to obtain an average for the country as a whole. Inasmuch as the 18 shipbuilding centers here dealt with contain almost one-half the urban population of the United States, a flat average of the two sets of figures would produce the desired figure. This combination is made in the following table, which shows—

1. Index numbers of cost of living in shipbuilding centers, with the base changed from December, 1914, to July, 1914, on the assumption of a 2 per cent increase between these dates, as explained above.

2. Index numbers for other cities and towns, on the assumption that cost of living therein increased 12 per cent less rapidly than in shipbuilding communities.

3. An average of the two columns combined.

INDEX NUMBERS OF COST OF LIVING IN SHIPBUILDING CENTERS, AND IN OTHER CITIES AND TOWNS, AND FOR THE UNITED STATES.

Month and year.	18 shipbuilding centers (base changed to July, 1914).	Other cities and towns (on assumption of prices therein having increased since 1916, 12 per cent less rapidly than shipbuilding centers).	United States (a mean between columns 1 and 2).
July, 1914.....	100.0	100.0	100.0
December, 1914.....	102.0	102.0	102.0
December, 1915.....	102.5	102.5	102.5
December, 1916.....	117.1	117.1	117.1
December, 1917.....	143.9	138.6	141.2
December, 1918.....	176.0	166.9	171.5
June, 1919.....	180.0	170.4	175.2

The figure of 75 per cent increase in living cost from July, 1914, to June, 1919, thus arrived at is 4 points higher than the figure arrived at by the National Industrial Conference Board—71 per cent from July, 1914, to July, 1919. It is believed that the former figure is the more nearly representative of conditions in the country as a whole. The study made by the National Industrial Conference Board was carefully done, but (with the exception of food prices) most of the prices and rent data were gathered solely by correspondence with clothing stores, real estate dealers, etc., and it is believed that any error resulting from this method of collecting data would be on the side of unduly conservative quotations.

Estimates of Increases, by Half Yearly Periods, 1914 to 1919.

The above computations, based as they are solely on the investigations of the Bureau of Labor Statistics, cover, prior to 1919, the single month of December. For intermediate months, no such precise information exists and an attempt to fill such gaps must be by way of estimate and interpolation. The simplest method of estimating is to assume that the increase from one known month to another is at a uniform monthly rate. Thus, if the increase between December of one year and December of another is 12, to assume that there was a uniform increase of 1 point each month would make the increase up to June 6 per cent. This method is of course not strictly accurate, as increasing prices may proceed by "jumps," with a tendency toward a "sag" in the summer months, although in the past few years of extraordinary price changes even this usual summer "sag" has not occurred at all regularly.

In the table following, this method is applied for a selected month—June—of each year. The results are given in column 1, which repeats the estimated index numbers of cost of living for the United States as a whole for the months covered by the original investigation of

the United States Bureau of Labor Statistics. As a means of checking these figures, the data of the National Industrial Conference Board are presented in column 2 and the retail food price index numbers in column 3. These two sets of figures seem to corroborate the estimates as made. Further corroboration is supplied by the wholesale price index numbers which, for reasons pointed out earlier in the article, can be used only as evidence regarding price *movements* and can not be accepted as showing the *amount* of change in the cost of living.

INDEX NUMBERS OF INCREASED LIVING COSTS FOR UNITED STATES, JULY, 1914, TO JULY, 1919.

[Based on data of the United States Bureau of Labor Statistics.]

Month and year.	Estimated index numbers (based on surveys made by United States Bureau of Labor Statistics).	Data of National Industrial Conference Board.	Retail food prices (United States Bureau of Labor Statistics).
July, 1914.....	100	100	100
December, 1914.....	102	.....	103
June, 1915.....	102	101	98
December, 1915.....	103	.....	103
June, 1916.....	109	109	110
December, 1916.....	117	.....	124
June, 1917.....	129	132	149
December, 1917.....	141	.....	154
June, 1918.....	156	152	159
December, 1918.....	172	.....	183
June, 1919.....	175	.....	180
July, 1919.....	.....	171	186

The percentage change between the estimated index numbers for any two months in the foregoing table can be found by dividing the difference between the two numbers by the lower number. The following show such percentages for selected periods:

December, 1914, over July, 1914.....	2 per cent.
December, 1915, over July, 1914.....	3 per cent.
December, 1917, over July, 1914.....	41 per cent.
December, 1917, over December, 1915.....	38 per cent.
June, 1919, over July, 1914.....	75 per cent.
June, 1919, over December, 1915.....	70 per cent.
June, 1919, over December, 1917.....	24 per cent.
June, 1919, over June, 1918.....	12 per cent.

Government Residence Halls, Washington, D. C.

By MARY CONYNGTON AND LEIFUR MAGNUSSON.

SHORTLY after the signing of the armistice, November 11, 1918, the continued building operations of the United States Housing Corporation came under the criticism of the Senate. Question was particularly raised against completing the residence halls built in Washington (D. C.) for woman war workers. The Senate immediately proceeded with an investigation. Some few mistakes in action by the corporation were brought out, and evidence was produced to show that the Housing Corporation had been exploited in a few instances by none too scrupulous contractors.¹

Little or no question has been raised by critics of the Housing Corporation as to the urgency of the need for the additional accommodation provided in Washington by the residence halls which it erected. The Secretary of War appeared before the House committee which had before it the Senate resolution to stop construction of the halls and showed the increased future need of all available housing accommodations. "It is undeniably true," the Secretary of War stated, "that in Washington at the present time the living conditions, particularly of the female clerks of the Government, are worse than they are in any city of the United States or have been in any city of the United States within my knowledge." The Secretary described the condition as one "in which the girls are literally living in layers."

Apparently the housing shortage in Washington has not diminished perceptibly since the signing of the armistice. There is still a long list of applicants waiting for rooms at the Government dormitories. Rental agencies also have long waiting lists. The War Department has required an increased force to handle demobilization and casualty records. The Census Bureau will require by September 30 an additional 500 clerks in connection with the Fourteenth Census, with ultimate requirements of an additional 2,800. The War Risk Insurance Bureau of the Treasury Department will continue to expand for some time to come before reaching the normal number on the staff necessary to handle all allotments and insurance disbursements

¹ Operations of the United States Housing Corporation. Hearings before a subcommittee of the Committee on Public Buildings and Grounds, United States Senate. Washington, 1919. 2 vols. (65th Cong., 3d sess.)

Public buildings and grounds. No. 17. Hearings before the Committee on Public Buildings and Grounds, House of Representatives, on S. J. Res. 194, directing that the United States Housing Corporation suspend work upon all buildings where construction is not more than 75 per cent completed. * * * Jan. 8, 9, 13, 14, and 15, 1919. Washington, 1919. 261 pp.

and collections. According to the Civil Service Commission, the total net reduction in the personnel of the Government in Washington, D. C., between November 11, 1918, and August 31, 1919, was about 2,800.

There is apparent no indication of a decline in rents in the District and real estate prices continue at the same high level. The city is underbuilt, due to a marked cessation of operations for three years. The records of the building inspector's office are significant and furnish the principal evidence of a housing shortage in the face of an increased population. The building of houses in the District reached its lowest level during the year ending June 30, 1918, when 529 permits for family dwellings and 9 for apartment houses were issued as compared with a normal of over 1,500 permits a year for those types of construction.

PERMITS FOR THE BUILDING OF FAMILY DWELLINGS AND APARTMENTS IN THE DISTRICT OF COLUMBIA, 1910 TO 1919.¹

Fiscal year ending June 30—	Number of family houses.	Number of apartments.
1910.....	2,023	79
1911.....	1,922	18
1912.....	2,174	29
1913.....	1,543	14
1914.....	1,161	34
1915.....	1,155	42
1916.....	1,349	60
1917.....	821	44
1918.....	529	9
1919.....	748	21

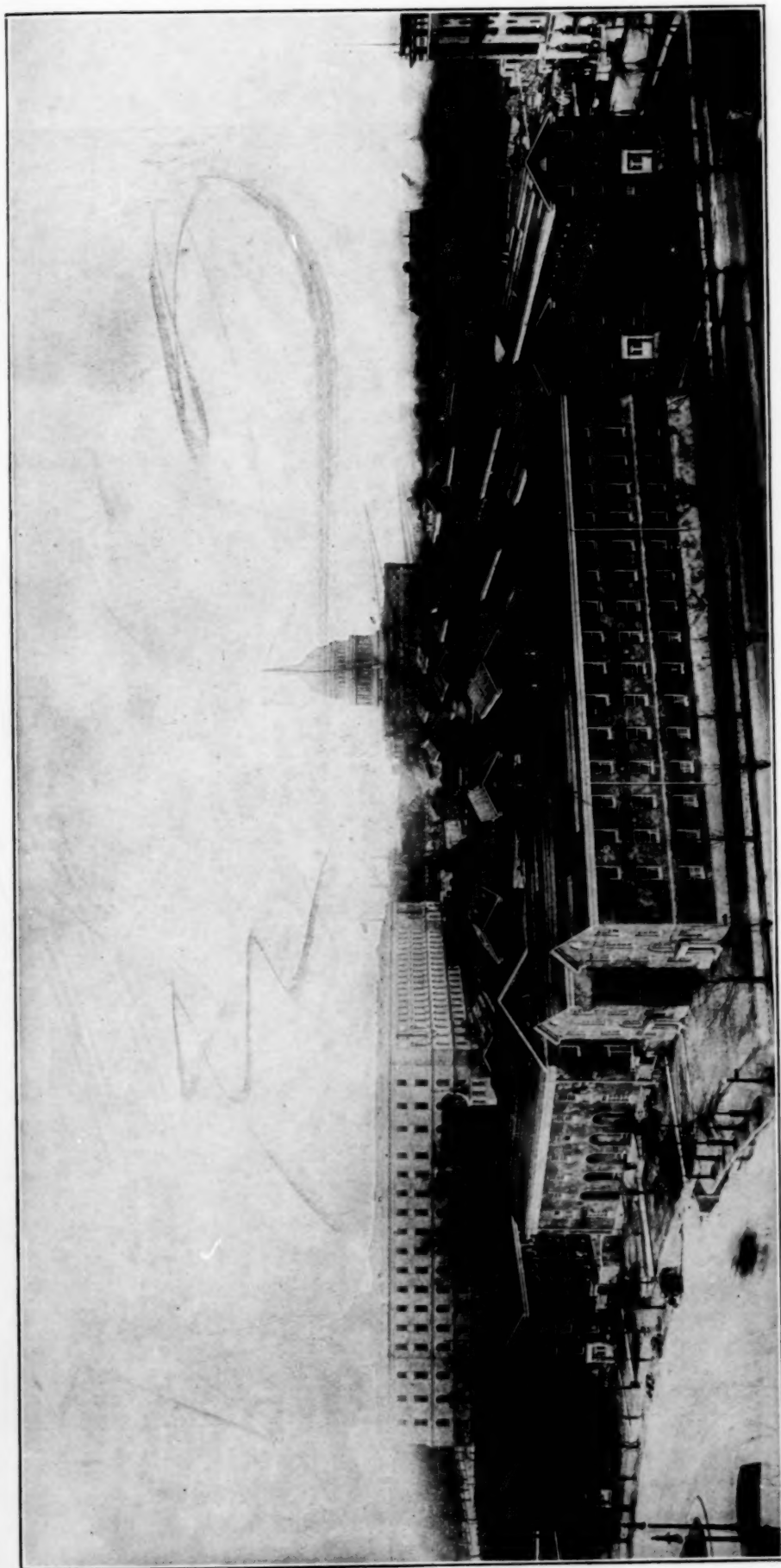
¹ Compiled from records of the building inspector's office, District of Columbia.

Congressional Action.

After enacting a measure empowering the Emergency Fleet Corporation to construct houses for its workers, Congress turned its attention to the housing of other industrial workers in munition establishments and of the civilian employees of the Government in the District of Columbia. In the housing bill passed in May, 1918, provision was made for the District of Columbia and an appropriation of \$10,000,000 was set aside on June 4, 1918. Work was proceeded with and contracts let for family houses and residence halls for woman war workers.

Residence Halls on Capitol Plaza and Union Station Sites.

Inasmuch as the erection of living quarters for woman war workers by the Government was looked upon as a temporary expedient the residence halls were located on Government-owned land and within the reach of all street improvements. The sites chosen consist of



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GENERAL VIEW OF GOVERNMENT RESIDENCE HALLS FROM UNION STATION.



DINING HALL OF UNION STATION GROUP OF GOVERNMENT RESIDENCE HALLS.

land which had been set aside and cleared as a public park and which lay between the Union Station and the Capitol. The tract occupies four blocks, two blocks on each side of North Capitol Street. There are two principal groups of halls, each being an independent unit with separate dining-room. One group is located immediately facing the Union Station; the other group is in the angle formed by the Senate Office Building and Capitol Grounds. The two groups are served by a common heating and power plant, a laundry, cold-storage building, and an infirmary. The arrangement on the blocks is very compact, but with a considerable amount of interior court space. Considering the temporary character of the buildings, their arrangement can not be said to be unduly crowded.

The buildings are of an exceedingly simple exterior and to secure any degree of attractiveness will have to rely upon ornamental trees and shrubs. The outside walls are hollow-tile blocks with stuccoed exterior, the roofs are covered with sheet asphalt, while the floor construction is of wood. Being only semifireproof the buildings are equipped with fire escapes and emergency exits and are supplied with an adequate water system.

Capital Costs and Maintenance.

The Housing Corporation always had before it the alternative of speed or costs. It elected to sacrifice the latter inasmuch as when it undertook its work the spring drive of the year 1918 was at one of its most critical stages. Those in authority and in touch with the war situation looked to a long war with the need of a large program of preparations. Speed was therefore the essence of the housing enterprise. The costs, being thus secondary, are no criterion of what can be done in normal times under peace-time efficiency of labor and ready availability of material. Much of the work was done at overtime rates. As a consequence of this untoward situation in building the cost of the residence halls reached the sum of \$2,432,000.

While the income from them is now keeping pace with the expenditures, the returns are far from being adequate to pay interest on the investment. Loss of interest on the investment is only one of the items to be charged to the war budget. Nevertheless it is instructive to know that since the halls became operative in January of this year revenues and expenditures have about balanced each other; and with the halls now completed and occupied revenues slightly exceed current expenses. It requires about 500 employees to operate the halls.

RECEIPTS AND EXPENDITURES FROM WASHINGTON (D. C.) RESIDENCE HALLS,
JANUARY-JULY, 1919.

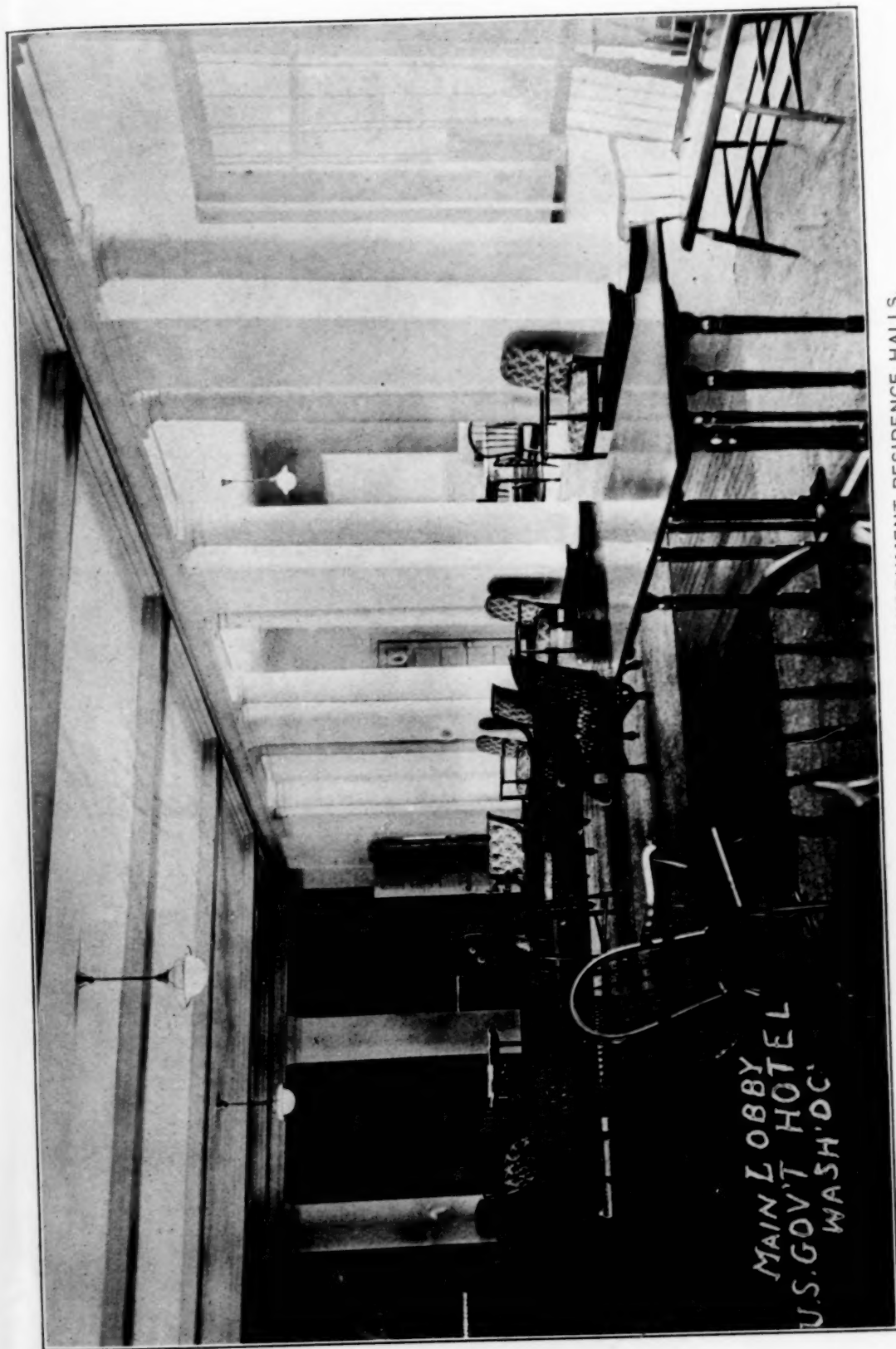
Month.	Number of halls open at end of month.	Number of occupants.	Receipts.	Expenditures.
January.....	5	710	\$7,097.02	\$6,500.00
February.....	6	916	17,419.33	15,752.25
March.....	8	1,258	42,915.13	66,500.00
April.....	10	1,491	49,405.45	47,095.17
May.....	11	1,657	56,512.84	56,278.50
June.....	11	1,692	71,259.45	68,306.00
July.....	12	1,810	74,095.12	69,582.24

What the Residence Halls Provide.

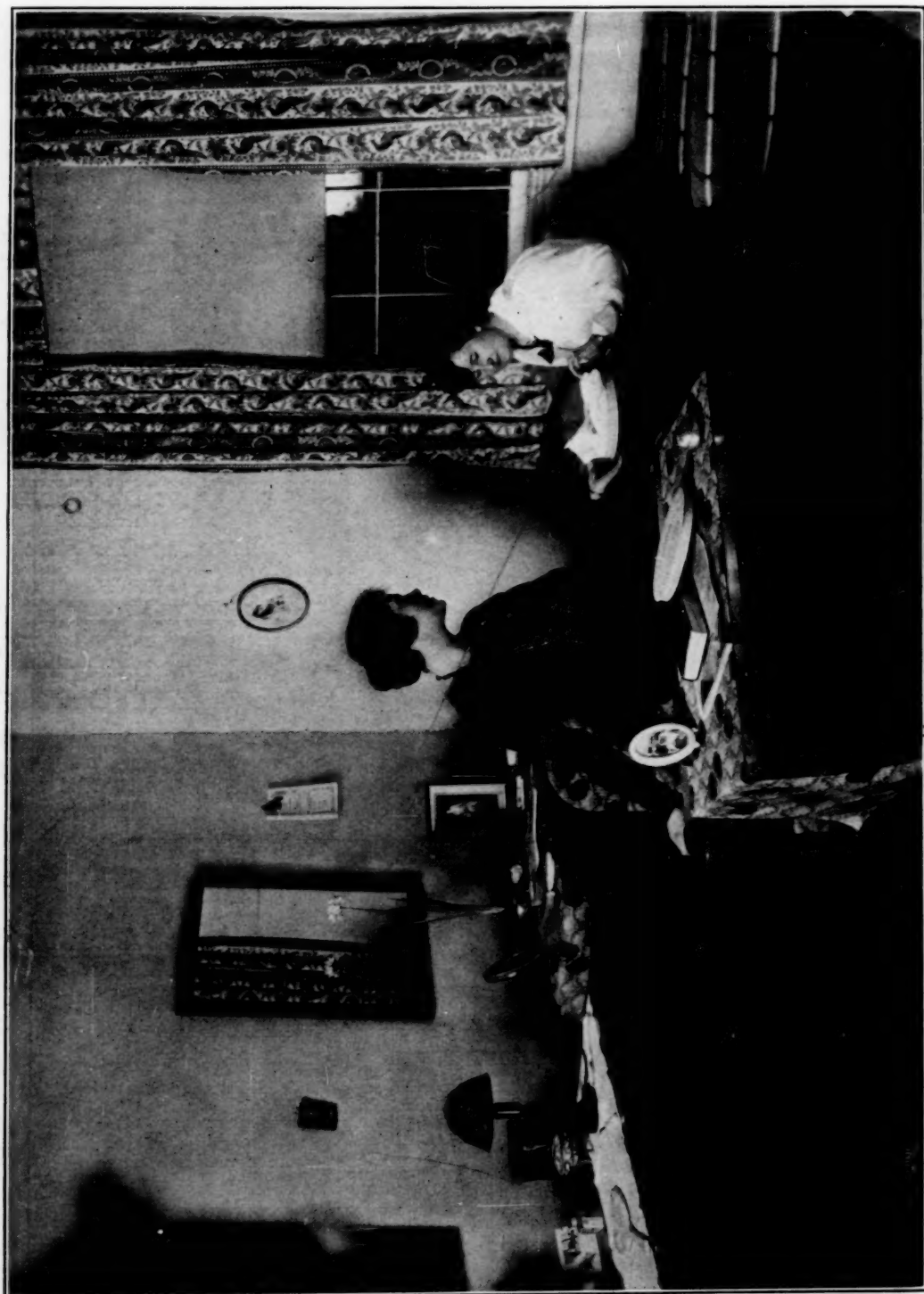
The facts that the rooms are continuously filled and that there is a long waiting list show that the halls are needed, but do not show how they are fulfilling their purpose. In the crowded condition of Washington, undesirable and even insanitary rooms have often been kept filled at a good price. Are the halls utilized only because Government workers can not find accommodation elsewhere, or are they filled because they offer good living conditions at a reasonable price? To answer this question it has seemed worth while to go into considerable detail as to what a guest secures in return for the \$45 a month which she pays for a room and two meals a day.

Each hall consists of two parallel wings or dormitories, connected at one end by a one-story building, which is divided into a reception lobby, a writing room, and several small parlors. These smaller rooms can be shut off, if desired, so that if a guest wishes to give a little party she can do so in privacy. All are comfortably furnished; the reception lobby has reading tables supplied with papers and magazines, and the effect, as one enters the hall, is pleasant and inviting. The two wings are three stories high, and combined contain 142 rooms. Most of the rooms are single, but at the end of each corridor are two double rooms larger than the others and having windows on two sides. Altogether about 1,800 guests now occupy the halls in addition to 120-odd employees.

The single rooms are rather small, measuring 10½ by 12 feet. Each is equipped with a single bed, a dresser, a small table, two chairs, a rug, a set basin with hot and cold water, and electric lights. There is a good-sized closet in each, and a cedar utility box, which slides under the bed or may be kept out in the room, according to taste. The wall paper is gray, the furniture is painted green, the hangings are cretonne, and the woodwork is finished in white, so that the general effect is restful and cheerful. For ventilation there is one window and a transom over the door. As the occupants can and do use the reception lobbies and parlors for reading, writing,



MAIN ENTRANCE TO ONE GROUP OF GOVERNMENT RESIDENCE HALLS.



CORNER OF DOUBLE ROOM IN GOVERNMENT RESIDENCE HALLS.

and social purposes, the small size of the rooms is not felt as a grievance.

The care of the rooms and corridors is entirely in the hands of maids, under the supervision of the house manager. A visit to the halls in the morning after the lodgers have left for their work discloses every door and window open, so that there is complete cross ventilation, and discloses also that the bedding is carefully aired and the mattresses turned before the beds are made up. Six towels and a complete change of bed linen are supplied weekly. Apparently absolute cleanliness is the rule of the place, and if there are difficulties in securing this standard with the scarcity of domestic help now prevailing, they do not appear on the surface.

Baths and sanitary conveniences are on each floor. The intention was to supply one bath to each 5 women, and for each 25 roomers four showers and one tub were put in, but in practice the showers are so much more popular than the tubs that the proportion in use tends to become one to six and a fourth lodgers. However, the tubs are there, if anyone chooses to use them.

The occupants have a number of incidental conveniences, the value of which it is hard to appraise. A laundry is maintained, in which residents may have their laundry work done at somewhat less than prevailing rates. In addition, in each building is a basement room fitted up with set tubs, drying places, and ironing tables, and here the guests may themselves do anything they please, from pressing out a wrinkled waist to doing their entire laundry. In each basement, also, is a small kitchen, where guests may make candy or do any special bit of cooking they may incline to. Cooking in the rooms is not permitted, on account of the danger of fire.

The opportunities for exercising hospitality might be included as incidental advantages. The parlors are open at all times to guests, and if anyone wishes to plan for anything more elaborate than a mere call she has practically a free hand. She may have guests to dinner, merely supplying herself with guest tickets, which cost 60 cents apiece (75 cents on Sunday), or she may request the exclusive use of one of the parlors and give a card party, a supper party, or whatever she chooses. The question of chaperonage is kept in the background. Residents are at perfect liberty to receive what guests they choose, men, of course, being entertained only in the reception lobbies, parlors, and dining rooms. As an official is always at the desk, and other people are about, the proprieties are fully observed without any formal rules to secure that effect.

The dining rooms, of which there are two, one for each group of buildings, are large rooms, filled with round tables seating six. Breakfast is from 7 to 8.30 and dinner from 5.30 to 7 on week days; on Sunday, breakfast is from 8.30 to 10, and dinner from 5 to 6.30.

Each dining room is under the charge of an experienced dietitian. The assistant manager's ambition is "to know that every woman, when she leaves the table, has had not only a meal which pleases her taste, but one which has given her the food elements she needs, in the proportions she needs, so that, as far as diet can accomplish it, she will be in perfect condition." For breakfast the usual menu is fruit, choice of two cereals, choice of eggs or some meat dish, tea, coffee, cocoa, or milk, and choice of toast or some quick bread; for dinner, soup, fish or meat, two vegetables, a salad, and dessert, with tea or coffee or milk.

One decided advantage connected with residence in the halls is the care given in case of illness. If a resident is ill breakfast will be sent up with a charge of 10 cents for tray service. Also, her condition will be promptly inquired into, and such arrangements made for her care as are necessary. A small infirmary with 10 beds was opened on the 1st of June, with two trained nurses in attendance and a diet kitchen attached in which such food as each case requires is prepared. Here cases of serious illness are cared for, while lighter cases are looked after in the patient's own room. The installation of women instead of men as night watchers—a change made early in the summer—was partly in the interests of health care. The women picked for this service have all had special experience or training fitting them for the posts, and among their other duties are giving first aid if any resident is taken ill in the night, filling hot-water bottles, giving simple remedies, or calling a doctor if the case demands it. An incidental but considerable advantage connected with the engagement of these women is the better ventilation it makes possible at night. The rooms are small, but if the doors and windows, opposite each other, are both left open, there is complete cross ventilation from the windows on one side of the building, across the halls, which themselves have ventilation from end to end, to the windows on the other side. When men watchmen were making their rounds every hour it was not possible to leave doors open, but with woman warders there is no difficulty in the way, and during the warm weather the residents may have, if they wish, all the air there is.

A common objection to homes or hostels for women is found in the numerous restrictions imposed. From this difficulty the residence halls are free. The houses close at 11 o'clock. Anyone who wishes to stay out later than this is expected to put her name on a "late list," and when she returns must give her name to the night watcher before entering, a precaution adopted to prevent people who have no right in the buildings from entering under the pretense of being residents. Apart from this, rules are conspicuous by their absence. The women who come there, being in the Government service, have

been accepted by the respective departments or bureaus or services as women of good character, and the management assumes that they are in all respects all right. So far this confidence seems to have been justified. Where some 1,800 or more women are gathered it is always possible that some will be inconsiderate or illbred, and as the enterprise gets past its first experimental stage some house regulations may become necessary in the interests of the majority. It is possible that some scheme of cooperative administration will be adopted to meet this need. The residents have already formed a tentative organization among themselves. Its purpose is mainly social, but it contains possibilities of development along the lines of cooperation in administering the internal affairs of the halls which the present management is anxious to foster.

Summing up the situation, then, the residence halls offer some pronounced advantages to their residents. First, and most important of all, they afford a safe and unquestionably reputable shelter. They are clean; they are comfortable; in case of illness, they provide care; they afford opportunities for companionship and hospitality; and they provide a number of incidental advantages which could hardly be duplicated in any private house in which a Government worker might obtain a room. These incidental advantages will be increased as the enterprise gets more fully established. One of the administration buildings, for instance, contains an auditorium which is used for recreational purposes. Here dances are given by the management for the residents, and on occasion the guests may arrange special dances for themselves. Here entertainments may be held, lectures or concerts given, and distinguished residents or visitors in Washington may be secured as speakers. Coming as the residents do from all over the country, often to return to their homes within a comparatively short time, the opportunity of seeing and hearing public men, and of learning at first hand of the working of the Government of which they form a part has its attractions. But whether such plans are carried out or not is in one sense immaterial. The halls are meeting an urgent need in an admirable manner. The figures as to the number of Government employees now in Washington and those expected within a few months show the insufficiency of the normal housing accommodations of the city, while from the standpoint of an outside observer, the safety, comfort, and convenience of the home they offer to women in the Government service more than justifies their upkeep.

INDUSTRIAL CONDITIONS.

A Joint Council in the Clothing Industry.

THE administrative function exercised by the labor manager has developed in the clothing industry until there are at least 50 such managers employed. At a series of conferences of the labor managers in the men's clothing branch of the clothing industry, it became clear that unity of action and policy on a national scale on the part of managers and employers was necessary, if the condition of the industry was to be improved and its future stabilized. These conferences resulted in a joint meeting of manufacturers and labor managers held at Rochester last June at which it was decided to recommend to each of the four central markets, namely, Rochester, Chicago, New York, and Baltimore, the creation of a national committee of manufacturers and labor managers to develop an organization for national collective bargaining and for dealing with other general labor problems of the industry. The four markets approved the plan and representatives met in New York on July 18. This meeting resulted in the adoption of the following articles of federation establishing the National Federation of Clothing Manufacturers, including those in New York, Chicago, Rochester, and Baltimore.

Articles of Federation.

The undersigned delegates representing with full authority the clothing manufacturers of Chicago, New York, Rochester, and Baltimore under the resolution of the conference of manufacturers and labor managers held in Rochester July 11, 1919, hereby establish the National Industrial Federation of Clothing Manufacturers.

The federation shall consist of a board of governors of four manufacturers with alternates, one member and one alternate from each district—eastern, southern, central, and western. Markets not at present represented in the federation may be admitted on application to the board of governors. Having been admitted, the board of governors shall designate the district with which the market shall be affiliated.

The alternate above referred to shall have power to represent his district only in the absence of the regular member.

The delegate representing the district shall be selected by the manufacturers of the district in the manner to be decided among themselves. The board of governors shall have full authority to pass upon the credentials of delegates from the various districts in the federation.

Every manufacturer, house, or association, by participating, directly or indirectly, in the selection of the district representative, obligates itself to conform to all the orders and concur in the decisions of the board of governors.

The board of governors shall have authority to bind the participating manufacturers to any agreement with the Amalgamated Clothing Workers of America, and to make rules and regulations governing the industrial relations between management and workers. It shall be responsible for establishing an industrial government with all necessary organization of administrative, judicial, and legislative functions to stabilize wages, hours, standards of efficiency, and all conditions of employment.

The board of governors shall immediately establish a national board of labor managers as one of its administrative agencies to which it may delegate authority to execute policies and policies adopted. Each district shall nominate a labor manager, who, when approved by the board of governors, shall become one of the four members of the national board of labor managers. The board of labor managers shall have a chairman responsible for the functioning of the board.

Each participating house, or association, obligates itself to contribute its pro rata share, as assessed by the board of governors, of the expenses incurred in the operations of this federation.

Amendments to these articles may be made upon the recommendation of a three-fourths vote of the board of governors and approved by three-fourths of the districts in the federation.

MAX FRIEDMAN,
C. W. B. SONNEBORN,
B. H. GITCHELL,
Representing Clothing Manufacturers'
Industrial Exchange of New York.
SAMUEL WEILL,
EDWARD ROSENBERG,
MEYER JACOBSTEIN,
Representing Clothiers' Exchange of
Rochester.

ALFRED W. STERN,
EARL DEAN HOWARD,
Representing Clothing Manufacturers
of Chicago.
SIEGMUND B. SONNEBORN,
KEPPELE HALL,
Representing Henry Sonneborn & Co.,
and Strouse & Bros. (Inc.), of Bal-
timore.

The plan for participation of the workers in industry which had been worked out in the Hart, Schaffner & Marx shops in Chicago¹ had been proposed to the manufacturers as a remedy for the chaotic condition in which the industry found itself and had been tried out with good results in various cities. After the formation of the federation, the organization proposed to extend this plan to cover the entire country, and invited the Amalgamated Clothing Workers of America to assist the manufacturers in building up a national industrial government for the industry. The national executive board of the union accepted the offer of the employers' federation and agreed to meet them in convention at Rochester, beginning September 15. The duty of the convention was to fix wages and conditions of work for the ensuing six months.

The clothing industry is a pioneer in the formation of an agreement for collective bargaining on a national scale. The plan, though similar to the industrial council plan already worked out in various British industries, is the first thing of the kind in American industry.

¹ See MONTHLY LABOR REVIEW for January, 1917, pp. 43-45.

National Industrial Conference Board Report on Industrial Conditions in Europe.

THE commission of the National Industrial Conference Board which visited Europe in the spring of 1919 "to get the point of view of Government officials, of labor leaders, and of employers" on the all-important problems arising from relations between employers and employed has issued an interim report,¹ mainly devoted to a discussion of "Efficiency of production," "Labor problems," and "Management." The countries visited were Great Britain, France, Belgium, and Italy, and in all these countries "it was evident that the economic life of the people had been greatly disturbed by the war."

Laborers had been withdrawn from industry to a much greater extent than in America; new laborers, women, those formerly unemployed, and foreigners, had been introduced to fill urgent needs; the working of demand and supply in all directions had been interfered with; new machinery and processes had been devised to aid unskilled labor; in many instances labor organizations for patriotic reasons had given up old restrictions on output; production was shifted to the making of munitions and articles needed for war; great changes in industrial organization resulted; governmental control of industry on a vast scale was inevitable; control by Government boards and price fixing of most needed articles followed; many new factories were built for war production, and private concerns became "controlled"; shipping was taken over by the State; and foreign trade, exports and imports, acquisition of food and raw materials, especially of coal, became entirely deranged. These and other considerations caused a mighty upheaval in industry.

The commission states that early in the investigation the question of efficiency in production presented itself, and attention is directed to some of the schemes which were adopted for the stimulation of productivity, as for instance the bonus and premium systems in Great Britain and the more general introduction of piecework, which served to give the workers higher wages in many cases and also resulted in benefits to the management by a spreading of the overhead charges. On the whole the result was an increase in production. The system of restricted output practiced by British trade-unions, which had grown up previous to the war, is commented upon, the reasons for this policy being given in the order of their importance as follows: (1) Fear of rate cutting by the employer; (2) dread of unemployment; (3) the desire to protect inferior workers; (4) the wish to safeguard health; and (5) the natural human disinclination to work too hard. Some of the restrictions affecting output were removed, notably those affecting hours and wages and those concerning the employment of women and unskilled persons in munitions work. As illustrating the reduced efficiency among workers in Great

¹ Interim report of the European commission of the National Industrial Conference Board. Boston, July, 1919. 34 pp.

Britain the commission cites the following: Heretofore the ability of the British to produce coal cheaply and to employ it in the working up of raw material has been essential to the maintenance of her foreign trade, whereas now the expense of producing coal has risen to such a point that America can successfully compete with her in selling coal in many foreign markets. "Cheap British coal seems to have gone forever."

Labor Problems.

The commission found widespread discontent among workers in all industries and in all countries visited, this condition being due in Great Britain, as explained by the Minister of Labor, to "the long strain of the war; the nervous effect produced by the extreme industrial efforts of the nation; the disturbance of normal economic life; the rise in the cost of living; and, in a certain measure, an absorption into English thinking of the revolutionary movements of Europe." There are, it is explained, two different states of mind in the labor world in Great Britain—the moderate and the radical attitudes, and "radical views have permeated all classes of labor. All these radical views aim at nationalization of essential industries, at 'democratic' control of industry, and a 'democratic' use of the powers of the State." Employers have found that they must adopt some method, varying with the existence of these different elements in their respective establishments, of meeting their employees and working out a solution of their differences. The machinery of shop stewards or shop committees has been developed and joint councils of workers and management have been established in many industries. The commission, however, believes it to be a mistake to suppose that mere machinery for joint discussion is likely to prove a cure-all. "Back of these proposals lies the more important fundamental, namely the spirit and reasonableness of both parties to the discussion."

At present, in spite of the existence of a large body of reasonable workers, there appears to be a truculent, bellicose, and threatening attitude on the part of many labor leaders which is not promising. On the other hand, much of the inertia and disregard of the needs of their employees by employers has vanished, and they are willing to go a long way to meet the demands of labor. So far, radicals have only too often regarded a desire by employers to make concessions as a sign of weakness. Their eyes are fixed on the ultimate goal of a reconstruction of society. As already observed, only too often a concession gained does not bring satisfaction, but only a new power to be used in making additional advances. There is needed a more reasonable spirit among labor leaders and a disposition to see the practical difficulties of industry. It may be that this may come about by joint discussions. Yet the acquiescence in new proposals, new legislation, seems only to indicate to radical leaders that nothing is likely to stop their progress.

A further development of the plans for bringing employers and employed together in discussion of their mutual interests has been the

Whitley industrial councils established in many industries, and the organization of the National Industrial Conference, backed by the Government itself.

In a chapter on "Management" the commission calls attention to the fact that in its opinion, both in Europe and in this country, "there is a lack of understanding as to function and wages of management in industry. The British workers regard management and capital as jointly antagonistic to labor."

The industrial manager * * * is born, not made. * * * He is the most important figure in the life of industry. * * * A manager is a member of the laboring classes, only he is distinguished by being a highly skilled laborer. * * * It is open to any other laborer of skill to obtain the wages of skill if he has the capacity.

The purpose of labor leaders in Great Britain in their desire to share in the management of industry is, in the opinion of the commission, not so much to increase the efficiency of production as it is to obtain a position of authority through which wages may be fixed at a rate more satisfying to the recipients of wages. "In the event that the workers should obtain control of industry, it is clear that it would result only in an exchange of managers."

It appears from evidence gathered by the commission that British employers have come to realize that in years past they have not had proper interest in their employees and that they are now trying "to correct the wrongs of the past in a fine spirit of humanitarianism and fair play." Practically all the employers interviewed in Great Britain advised against the complete organization of employees, and "did not favor a development of labor unionism as such because of the practical difficulties in securing a conservative attitude of mind among labor leaders. They would welcome and cooperate, however, with a more moderate and conservative unionism."

In France the situation was found to be somewhat different. Shortage of labor before the war and the losses on the battle fields "have produced a marked result on the thinking of French workingmen and their leaders, so that * * * they no longer oppose the introduction of labor-saving machinery and methods for furthering efficiency of production, but even demand that employers provide the most efficient methods and equipment."

In discussing the attitude of unionism that labor should not be regarded as a commodity, and that, whether abundant or not, all labor should be paid wages sufficient to provide not only the necessities of life but also comforts and recreation, and that as the cost of living rises wages should rise perforce, irrespective of the inequality of workers or differences in productive capacity, the commission expresses the view that such a theory would lead to still higher cost of production and still higher cost of living.

Indeed there is no other permanent way to bring about higher wages than by creating higher individual productivity. Employers and employees should be as one in enforcing this principle; and employers can best serve the common interests of both laborers and producers by encouraging industrial training and every possible plan for instructing their employees so that their productive efficiency can be promoted. Then wages should rise with the rise in industrial efficiency. That is the crux of the whole matter.

The remedy for industrial discontent, as indicated by British conditions, is not to be found, in the opinion of the commission, in the complete inclusion of all laborers in the unions, nor the establishment of means for joint discussion, but rather "the creation of such a normal, rational point of view on both sides as will allow of cooperation towards increasing productivity."

The main recommendation of the commission to American industry is briefly stated in the following quotation from the final paragraph of the report:

Each employer should regard it as his personal duty to establish direct and cordial relations with his workers. It will not do to drift into a policy of neglect, as have some British employers in the past, which has borne such bitter fruit in the dissatisfaction of the present day. The employer must see to it that no charge can be brought against him of not intelligently looking out for the interests of the rank and file in his establishment. * * * For us the point is that everything depends upon the spirit of humanity and sympathy which animates both parties to the wages contract. * * * The employer must take the lead; much in the way of leadership is expected of him. He must generally plan to prevent grievances from rising by showing a genuine interest in a fair system of remuneration, in healthful shop conditions, the proper and sanitary housing of his workers, and the welfare of the community in which his plant is located. If he is really at heart trying to raise the standard of living, as he ought, of his employees, he should, moreover, be occupied not only with questions of wages or material rewards, but with matters which will cultivate the intelligence, morals, and character of men. Granting this attitude of mind, then, there must be a corresponding point of view on the part of labor if any permanent and peaceful adjustment is to be accomplished.

The National Industrial Conference Board promises a final report which will give the facts upon which the interim report is based, and will carry into full detail a descriptive analysis of the industrial situation as the commission found it in Great Britain, France, and Italy.

Scientific Research as Applied to Industry.

SCIENTIFIC research as applied to industry is a subject of increasing national and international interest. That it really concerns labor as deeply as it does capital is evident from the public statement of the attitude of the various labor organizations of different countries toward its development.

The MONTHLY LABOR REVIEW for February, 1919 (pp. 75, 76), contains a brief summary of the British Labor Party's reasons for fostering scientific investigation, while a resolution adopted by the American Federation of Labor at its recent convention in Atlantic City voices the opinion of organized labor in America on the same subject. This resolution differs from the reconstruction program of the British Labor Party in that it does not emphasize labor's special participation in scientific research. It is, however, the first definite official action on the great question of the relationship between science and industry; it recognizes the direct results of the application of scientific principles upon the standards of living and increased output, and points out the importance of science in the solution of Federal, State, and local problems. The resolution follows in full:¹

WHEREAS, Scientific research and the technical application of results of research form a fundamental basis upon which the development of our industries, manufacturing, agriculture, mining, and others must rest; and

WHEREAS, The productivity of industry is greatly increased by the technical application of the results of scientific research in physics, chemistry, biology, and geology, in engineering and agriculture, and in the related sciences; and the health and well-being not only of the workers but of the whole population as well, are dependent upon advances in medicine and sanitation; so that the value of scientific advancement to the welfare of the nation is many times greater than the cost of the necessary research; and

WHEREAS, The increased productivity of industry resulting from scientific research is a most potent factor in the ever increasing struggle of the workers to raise their standards of living, and the importance of this factor must steadily increase since there is a limit beyond which the average standard of living of the whole population can not progress by the usual methods of readjustment, which limit can only be raised by research and the utilization of the results of research in industry; and

WHEREAS, There are numerous important and pressing problems of administration and regulation now faced by Federal, State, and local governments, the wise solution of which depends upon scientific and technical research; and

WHEREAS, The war has brought home to all the nations engaged in it the overwhelming importance of science and technology to national welfare, whether in war or in peace, and not only is private initiative attempting to organize far-reaching research in these fields on a national scale, but in several countries Governmental participation and support of such undertakings are already active: Therefore, be it

Resolved, By the American Federation of Labor in convention assembled, that a broad program of scientific and technical research is of major importance to the national welfare and should be fostered in every way by the Federal Government, and that the activities of the Government itself in such research should be adequately and generously supported in order that the work may be greatly strengthened and extended; and the secretary of the federation is instructed to transmit copies of this resolution to the President of the United States, to the President pro tempore of the Senate, and to the Speaker of the House of Representatives.

¹ American Federation of Labor. Proceedings of the convention. Seventh day. Atlantic City, N. J. June 17, 1919. pp. 5-6.

The Situation in the English Coal Industry.

RECENT articles in the MONTHLY LABOR REVIEW¹ have dealt with the demands presented in February, 1919, by the Miners' Federation of Great Britain, under threat of a strike which would involve the whole of the coal fields, with the Government's appointment of a commission to consider these demands and make appropriate recommendations, and with the reports brought in by this commission in March and June. When the report of March 20, recommending a decrease in hours and an increase in wages, was accepted by both the Government and the miners, it was supposed that the country was in a fair way to secure peace in the coal fields, but for the last two months the coal industry has been a storm center, and it is gravely doubtful whether the climax has yet been reached.

The immediate causes of trouble have been two: Disagreement as to the meaning and enforcement of the Sankey report, and a campaign for and against the adoption of the second Sankey report, which advocated nationalization of the mines.

Disagreement over Application of the First Sankey Report.

The first trouble arose over the question of what increase in piece rates should be given when the shorter hours provided for in the first Sankey report should go into effect. A summary of this report is given in the MONTHLY LABOR REVIEW for May, 1919. The circumstances of its adoption were rather peculiar. The commission of 13 had brought in three reports, one signed by the chairman and three of the employers' representatives, one signed by the six labor representatives, and the third signed by the three mine owners. Strictly speaking, there was no majority report, but since the labor report bore more signatures than either of the others, the miners thought there was a good case for considering it the report of the commission, and were reluctant to accept the report of the chairman, which the Government adopted. They finally agreed to accept it, however, on condition that wages should be changed so that total earnings should not be diminished by the change in hours.

The shorter hours were to become effective July 16, and in June the district miners' associations were busily engaged in negotiations with the corresponding associations of mine owners as to the necessary changes in wages. In the coal fields where an eight-hour day prevailed, there was a general understanding that the increase should be proportional to the decrease in hours, giving an advance of 14.3 per cent in piece rates, with corresponding changes in time

¹ May, 1919, pp. 109-114, and August, 1919, pp. 78-86.

rates. In some districts these negotiations were practically finished, an agreement having been reached "subject to the approval of the Coal Controller," when the Government suddenly intervened. On July 2 the Coal Controller issued a circular saying that he would not agree to any advance in piece rates beyond 10 per cent; if employers wished to grant more than this, they must pay the difference out of their own guaranteed profits. Apparently the idea underlying this mandate was that since the adoption of the shorter hours was expected to reduce output by 10 per cent, an increase of 10 per cent in wages would exactly meet the situation. The miners, however, protested that a flat increase of this kind would be altogether unfair, since hours varied in different districts, some already having the seven-hour day which the others were to gain, and that the only fair way was to adjust the increase to the actual decrease in time. By July 8 the Coal Controller had modified his order, permitting an advance of $12\frac{1}{2}$ per cent in some of the coal fields. This did not meet the miners' idea of fairness, but it might have been possible to compromise the difficulty but for developments in the political campaign which by this time was going on vigorously over the adoption of the second Sankey report, which had been made public June 23.¹

Campaign for Nationalization of the Mines.

This report, signed by the chairman, and substantially agreed to by the six labor members of the commission, had recommended the nationalization of the mines and had outlined a scheme for their management in which the miners were to have an effective voice. As seven of the 13 members of the commission had agreed to this, it was distinctly a majority report, and the miners held that the Government was bound to adopt it. But every conservative interest in the country was up in arms against the idea of nationalization, and the Government made no statement as to the position it intended to take.

The question was quickly carried over into practical politics. Two Parliamentary seats becoming vacant, by-elections were called, and the Labor Party, having nominated a candidate in each of the districts, proceeded to make the contest on the principle of the nationalization of the coal industry. In both of these districts, East Swansea and Bothwell, a coalition candidate had been elected by a large majority in December, but in both it soon became evident that the Labor Party was not only conducting a vigorous campaign but had at least a reasonable prospect of success. The polling in East Swansea was to begin July 10. On the evening of July 9, the Gov-

¹ See MONTHLY LABOR REVIEW for August, 1919, pp. 78-86.

ernment announced in the House of Commons that because of the approaching shortening of the miners' hours, the increase of their wages and the falling off in production, it was necessary to raise the price of coal by 6s. (\$1.46) a ton, and that the increase would take place on the 16th of the month. To requests that the date of the increase should be postponed to permit of discussion as to its necessity, the Government replied that this was impracticable; the deficit was piling up every day and no delay in meeting it was possible.

The effect of the announcement was electrical. Apart from the dismay which such a material increase in price naturally caused, there was widespread questioning as to why the advance was made at this precise time, without any preliminary discussion with either miners or coal owners. Ugly charges were freely voiced in the radical and labor papers and were more than hinted at in the more conservative journals. One of the liberal papers expressed, in its Parliamentary correspondence, what it claimed was a very general feeling:¹

The labor members suspect that this is a political maneuver. The representatives of the coal owners are evidently not sure that the labor members are not right but they would equally resent any political dodge of this kind. Therefore they want to know the figures on which the announcement is based. They think that the white paper which is to justify the Government's announcement of the increased price ought to be published at once. * * *

On both the labor and the Government side in Parliament there is afloat the suspicion that the Government may have made their sensational announcement in order to influence the Swansea by-election. * * * Such a maneuver is almost incredible, but it is necessary to note that it is widely believed.

Even *The Observer*, while assuming that the advance must be necessary, admits that the manner and time of announcing it were ill chosen:²

The eve of the Swansea election, fought on nationalization, was a peculiar moment, certain to expose the Government to the suspicion of sharp practice. It is the kind of suspicion which is apt after a while to grow and rankle in the minds of the more moderate sections of labor as well as of irreconcilable extremists. * * * The Government would have been better advised to act earlier or a little later.

The case made out for the increase was by no means unassailable. The data of the white paper, issued July 11, were open to question, both as to accuracy and fairness, and the validity of the argument on which the increase was based was fiercely attacked. The East Swansea election was lost to the laborites, a result which was generally attributed to the effect of the announcement made on the very eve of the election when it was too late for the miners to get their side before the electorate, and this loss increased the bitterness of their campaign as a whole.

¹ *Manchester Guardian*, July 11, 1919.

² *The Observer*, July 13, 1919.

On the 16th, the day on which the increase was to go into effect, time was given for a debate on the matter in the House of Commons, in which, after prolonged argument, the Government proposed a delay of three months in putting it into effect, provided the miners would pledge themselves to do their best to increase production, and to refrain from strikes and stoppages during that period. The labor members of the House promised to lay the matter before the miners' federation, which was to be in session that week, and the Government issued an order delaying the increase until the federation could act.

The suspicion caused by the time chosen for the announcement of the increased price militated against the miners' acceptance of these terms. They believed that the main responsibility for lowered production lay with the management, which failed to provide necessary equipment, allowed mines to be underworked because of lack of transport for coal when secured, etc. They had repeatedly asked for a Governmental investigation to place the responsibility, but this the Government refused to undertake. They resented the present proposal as an attempt to place the whole onus for reduced output upon them. More strongly still they suspected the motive underlying the proposal that they should renounce for three months their right to strike. The Government had not yet declared itself on the matter of nationalization. If it should refuse to accept the Sankey report the miners might very probably wish to strike, and they had no mind to tie their own hands while the Government remained free. Consequently, they passed the following resolution:¹

That this annual conference, having heard the report of the miners' members of Parliament of the discussion in the House of Commons, on the Government's proposal to raise the price of coal 6s. [\$1.46] a ton, declares the increase is not necessary and should be avoided.

It regards the problem as one of production only.

It is of opinion that production can only be increased to a point which will make industry self-supporting, without additional charges to the consumer, if the economies set forth in the first Sankey report are effected, and the recommendation of the majority of the commissioners as to immediate change of ownership and control in the mining industry are passed into law.

It therefore informs the Government that it is prepared to cooperate with the Government to the fullest extent to put such economies into effect, and recommendations into law.

Upon this, the Government issued an order that the increased price should go into effect July 21.

Yorkshire Strike.

Meanwhile, no agreement had been reached as to the increase in piece rates, and when the 16th, the day on which the shorter hours were to go into effect, came with no settlement in sight, the York-

¹ Daily Herald, London, July 18, 1919.

shire miners to the number of 150,000 went on strike. A few days later they did much to alienate public sympathy by calling out the pump men, thereby risking the flooding of the mines, a danger which the Government met by sending in men from the navy to man the pumps. Other strikes took place in Lancashire, South Wales, Kent, and Durham. A number of grievances were brought up, but it was agreed that the question of rates was the principal trouble, and that if that were once out of the way the others could soon be adjusted.

The Times summed up the situation editorially as follows:¹

It was estimated that the reduction of one hour's work daily would mean a reduction of 10 per cent in output. The men were entitled, under the Sankey award, to a proportionate increase in their piece rates, so that they would suffer no loss in wages. To Sir Auckland Geddes the sum seemed simple, and he directed the Coal Controller (evidently not with that official's concurrence) to limit the increase in piece rates to 10 per cent, an amount afterward increased to 12 per cent. But the Yorkshire miners had already demonstrated to the coal owners that they were entitled to 14.3 per cent, and believed that they had a claim to 16.6 per cent. They were actually in process of settlement with the coal owners on a basis of 14.3 per cent when Sir Auckland Geddes instructed the Coal Controller to issue his ill-timed order. One-half the Yorkshire coal owners then said they would pay the difference between 10 per cent and 14.3 per cent out of their own pockets in order to avoid a strike, but the other half, who can not in the least be condemned, said they would abide by the Government order. The miners were indignant and the strike began.

The Coal Controller announced that he would take no steps to settle the difficulty until the men returned to work, but the Government, as a whole, was less intransigent. Conferences were held between the Government and the executive of the miners' federation, which resulted in the Government's giving up the idea of a flat increase and adopting a formula intended to secure for each district an increase of rates exactly proportioned to the decrease in hours. The miners' federation assented cordially to this, and at once sent out notices to the different district associations recommending that the Government's formula be accepted. For the most part the miners went back to work on this agreement, but in Yorkshire a situation developed which would have been ridiculous had it not been so serious. Four days after the agreement upon the formula one of the daily papers thus summed up the position:²

The miners are standing pat. They welcome the new piece-rate formula on the assumption that it offers them the wages they struck for, but they are waiting apparently for the employers or for the Coal Controller to come and tell them so. The employers on their side regard themselves as in the hands of the Coal Controller, without whose assent they can come to no agreement with the men. And that official does not appear, so far, to have made any audible advance to either party. * * *

At the very beginning of the strike the Coal Controller refused to talk to the men unless they first returned to work, and there is no evidence that he has abandoned this attitude. As for the owners, even if they felt at liberty to ignore the Controller and

¹ London Times, July 25, 1919.

² Manchester Guardian, July 29, 1919.

reopen negotiations on their own account, they appear to be at a sad disadvantage from the fact that the formula and a clear statement of its application to the Yorkshire district has not yet come down to them.

The formula arrived presently, with the statement that it would work out at an advance of 11.8 per cent for the Yorkshire fields; a little later it was admitted that there was an error in this calculation, and that the correct increase was 12.2 per cent. The miners were unwilling to accept either figure, but they were in a weak position strategically, because the miners' federation had accepted the general principle of the Government's formula, and while the Yorkshiremen were within their rights in refusing to let the federation settle for them a question of local wages, they were in the apparent position of going counter to their own leaders. They could not, therefore, call on the federation for any help in their fight, and it soon became evident that if the Government maintained its position necessity would force the miners into submission. The coal owners were not much more anxious for this result than the miners, for they did not relish the prospect of having to carry on the industry with a body of sullen, resentful workers who had been forced by hunger to accept what they believed to be a violation of the Government's pledge to them. The owners, therefore, urged the miners to meet them, and persuaded them to join in sending an appeal to the Government to meet representatives from both sides and discuss with them the situation. The Government acceded to this request, but the details of the conference were not made public, and no compromise was reached. A week later, August 15, the South Yorkshire miners voted to go back to work, and the West Yorkshiremen followed their example August 20. It was roughly estimated that the stoppage had caused a loss of production of about four million tons of coal, and had cost the miners' associations about £400,000 (\$1,946,600) in strike benefits. As their treasury was supposed to contain, before the strike, approximately £700,000 (\$3,406,550), they were evidently in a much weaker position than before should any other occasion of striking arise. It was also felt that they had alienated public sympathy by allowing the damage to the mines which followed the withdrawal of the pump men, and had lessened the prestige of the federation in the public mind by their refusal to accept the terms which it had indorsed.

The Government and Nationalization.

Meantime, the Government delayed any declaration of its policy toward nationalization of the mines, as recommended in the second Sankey report, and a rumor began to spread that it intended to ignore this report and adopt some plan of private ownership under public

control. The by-election of Bothwell, fought on the principle of nationalization, resulted in an overwhelming majority for the labor candidate, and the Labor Party began to press for an announcement of policy, but the Government refused to be hurried. On August 18 Parliament rose for its summer recess, and on that date the Prime Minister made a speech on the general situation in the course of which he gave the main lines of the Government's policy toward the coal mines. The Government intended, he said, to acquire the royalty rights, as recommended unanimously by the coal commission, but it was not willing to nationalize the mines. It wished, however, to secure the advantages of unified management, and its plans for doing this were rather sketchily outlined as follows:¹

We have accepted the principle of unification and reorganization, and we think that even the owners realize that there is a very great case made out for that, because you have the waste which is due to a large number of different enterprises running in the same area under different management—waste of power, waste in management, waste in distribution. There is also undoubtedly a case to be made out for giving the miners a greater interest and voice in the working conditions which affect them. Therefore we make this recommendation—that in view of the fact that the living and livelihood of the miners depend on the way the mines are worked, means should be devised for securing their cooperation in shaping the general conditions of the industry without interfering with the executive control of individual mines.

Now I come to our recommendation with regard to unification. It is that the industry shall be so organized as to reduce to a minimum the expense of management and working charges, and with this end in view the country should be divided into defined areas, in each of which the amalgamation of neighboring mines should be undertaken within a limited period, say two years; and that the workers in and about the mines should have directors representing them on the body controlling the area group to which they belong.

The scheme of amalgamation must be subject to the approval of the Government, and must conform to all the conditions laid down by the Government for the protection of the general body of consumers. The Government proposes to prepare a scheme and submit it to Parliament with the least possible delay, by which the minerals should be purchased by the State and funds raised for the purpose of promoting schemes for the social improvement and amelioration of the conditions and amenities of life in the mining villages. The State should not purchase the business of the mines. The unification should be promoted by amalgamation in defined areas, the miners to be given a certain period to consider whether the scheme is adequate for the purpose. * * *

The worker will have two methods for making his influence directly felt—first of all in the schemes for giving him representation on committees which will have a voice in the conditions under which the work is done; and in the second place, he would have a direct representation by nominating a certain number of directors for the area group, who would have direct control of the mines in these various areas.

This plan is very far from satisfying the workers, who regard it as a direct violation of the Government's pledges made at the time the coal commission was first appointed and at the time of the adoption of the first Sankey report. Parliament having adjourned, no im-

¹ Manchester Guardian, Aug. 19, 1919.

mediate action on the plan is possible, but both the miners and the coal owners are employing the time in trying to strengthen their respective positions. The coal owners have formed an association, and are carrying on an extensive propaganda by newspapers, pamphlets, and advertising. The miners have less publicity of this kind, but are contesting each new by-election as the opportunity offers, making nationalization one of the leading points. The trade-union congress held in Glasgow early in September afforded an opportunity for putting the matter formally before the whole body of trade-unionists, who gave a warm support to the miners' position. A resolution was offered calling upon the Government to adopt the majority report on the nationalization of the coal mines with joint operation, and including this provision:

In the event of the Government still refusing, a special congress shall be convened to decide what form of action shall be taken to compel the Government to accept,

This resolution was carried by a vote of 4,478,000 in favor to 77,000 opposed. It is considered probable that in view of this vote the Government's proposed scheme will be given up, and that it must be nationalization or nothing in the coal fields. Parliament is not expected to reassemble, however, until the latter part of October, and there is abundant time for new developments before then. In the meantime both parties are vigorously working up their campaigns, and the nationalization of the mines has become one of the leading questions of the day in England.

Attitude of Unskilled Labor Toward Restoration of Prewar Conditions, Great Britain.

IN NOVEMBER, 1918, the English Government brought in a bill intended to fulfill its pledge to the trade-unions as to the restoration of the customs and restrictions which they had consented to relinquish during the war. This bill was very unsatisfactory to the workers, and as the end of the Parliamentary session was at hand, the matter was allowed to go over. On April 15, 1919, a second bill, which had been drawn up in conference between the Government and the trade-union leaders, was introduced.

The most important features of this bill are found in the following sections:

1. Where, in any establishment to which this act applies, any rule, practice, or custom obtaining before the war in any industry or branch of an industry (hereinafter referred to as a trade practice) has, during and in consequence of the present war, been departed from, the owner of that establishment shall be under an obligation, at the expiration of one month from the date when such notice as is hereinafter mentioned

is served on him, to restore or permit the restoration of the trade practice so previously obtaining, and for one year after such restoration is effected to maintain or permit the continuance of the trade practice.

Where any industry or branch of industry, which before the war was not carried on in an establishment, commenced to be carried on in the establishment during the war and continues to be carried on therein after the termination thereof, or where an establishment is one which commenced to be worked after the beginning of war, the owner of the establishment shall be under the obligation, at the expiration of one month from the date when such notice as is hereinafter mentioned is served on him, to introduce or permit the introduction of, and for one year after such introduction is effected to maintain, or permit the continuance of, such trade practices as obtained before the war in other establishments where that industry or branch was carried on under circumstances most nearly analogous to those of the establishment in question.

An obligation under this section shall not become binding on the owner of any establishment unless within three months after the termination of the war there is served on the owner, by or on behalf of a majority in the establishment of the class or grade of workers whose custom it was before the war to maintain the trade practice in question, a notice in the prescribed form requiring the observance of the obligation, and specifying the nature of the practice to which the obligation relates, and if the change of practice was made in pursuance of an agreement, specifying also the agreement.

If the owner of the establishment is not prepared to comply with the notice, or is in doubt as to the nature of the trade practice to be restored or introduced, he shall within fourteen days from the service of the notice on him serve on the sender of the notice a counternotice in the prescribed form to that effect.

Where such a counternotice is given either party may apply to a munitions tribunal of the second class to determine whether the obligation exists or, as the case may be, the nature of the obligation, and the tribunal may, after giving all persons appearing to the tribunal to be interested in the matter an opportunity of being heard, make an order on such terms as to costs or otherwise as the tribunal may think fit, declaring whether any obligation exists, or, as the case may be, the true interpretation of the obligation, and any such order shall be conclusive in any proceedings that may subsequently be taken against the owner in the matter, and a copy of every order so made shall be registered at the Ministry of Labor. * * *

2. If any person fails to comply with an obligation imposed upon him by this act, he shall be guilty of an offense under this act, and on conviction shall be liable to a fine not exceeding 25 pounds [\$121.66] for each day, or part of a day, during which the offense continues.

Proceedings for offenses under this act shall be taken before munitions tribunals of the second class in like manner as for offenses under the Munitions of War Acts, 1915 to 1917.

Proceedings against an employer for an offense under this act may be instituted by or on behalf of a trade-union or federation of trade-unions, and any party to any such proceedings may appear and be represented by an official of the trade-union or federation of trade-unions, or of the federation or association of employers, to which he belongs. * * *

3. Subject to the provisions of this section, the provisions of the Munitions of War Act, 1915 to 1917, relating to munitions tribunals, shall, notwithstanding anything in those acts limiting the duration thereof, continue in force so long as may be necessary for the purposes of this act. * * *

4. The establishments to which this act applies are establishments in which munitions work within the meaning of the Munitions of War Acts, 1915 to 1917, has during the present war been carried on, and any other establishment in which the departure

from the practice was made in consequence of the two agreements of the nineteenth and twenty-fifth days of March, nineteen hundred and fifteen, respectively, commonly known as the Treasury agreements, or in pursuance of any other agreement in writing.

This act shall apply to Crown establishments; that is to say, establishments belonging to or under the control of His Majesty or any Government department, in like manner as it applies to establishments belonging to subjects, and any proceedings which under this act can be taken by or against the owner of any establishment may be taken by or against the Crown establishment concerned in the name by which the establishment is usually known.

The bill was brought up for action on June 2 and, as the Government and the unions were understood to be in agreement upon it, the supposition was that it would pass through all its stages at one sitting. Sufficient opposition developed to block this program, and the bill has had to go through its stages in the customary fashion.

Taken literally, the bill would permit the complete upset of the English engineering trade, which has been practically revolutionized during the war. All the discussions imply, however, that there is an understanding between the Government and the men that the rights it gives shall not be pushed too far, and that there is no intention of objecting to such practices as the subdivision of work, the standardization of product, the use of improved machinery, and the like. The opposition chiefly centers around the position in which it leaves the unskilled workers, and more especially the woman workers. Under the terms of the bill, the unions are at liberty to object to the employment of women or of unskilled men on any machine or in any process at which they were not commonly engaged prior to the war. But the splitting up of jobs and the introduction of new machinery has increased immensely the amount of work which can be performed by a worker who is either untrained or trained only for one process, thus constituting a large class of workers who may be excluded from the trades under the present bill. It is generally felt that the unskilled men are in little danger, but the women believe that they are exposed to very grave risk, and they are protesting against the passage of the bill in its present form. They bring against it three principal objections: It places the women, who have had no voice in drawing up the bill, at the mercy of the trade-union men; it gives the force of law to what was formerly mere trade-union custom; and it extends the field over which this legalized custom is to have sway.

Analysis of Objections to the Bill.

Under the first objection, it is pointed out that women are not admitted to the trade-unions of skilled engineering workers, and, though they are making their way into the unions of the unskilled they are not in a position to sway the policy of the organizations.

Therefore, they will have practically as little weight in determining the application of this bill as they had in drawing it up. Whether or not they may continue in trades in which they have proved their ability will be left solely to the option of men unionists. They believe that the men who have left these trades to go into military service ought to be reinstated; they believe that the claims of ex-soldiers come before their own; but they do not believe that it is either wise or just to set up a sex barrier, and to give men the right to exclude women, as women, from work in which they have shown their competence.

Under the second head they point out that before the war women were employed in certain kinds of engineering work, and that the number employed and the kinds of work on which they were engaged were both increasing. In spite of trade-union customs, employers were introducing women more and more numerously. Under this bill, employers who try to do this will have the whole force of the Government against them, and will render themselves liable to such heavy penalties that they will scarcely wish to take the risk. Under the guise of restoring prewar practices, the bill will make the exclusion of women far more complete than trade-union practice ever succeeded in rendering it.

And thirdly, in making the bill apply to new industries established since the outbreak of the war, they think the Government is unreasonably extending the scope of the trade-union monopoly. The pledge to restore prewar practices can not fairly apply to industries built up since the war began.

Such industries as aircraft, optical glass and scientific instrument making, and various special branches of the engineering trade were hardly carried on at all in this country before the war, except in a purely experimental fashion. In the enormous developments which have taken place in them during the last few years, a new set of conditions have grown up, the most notable of which is the employment of women. This change in conditions has taken place since the time when the Government gave its pledge, and some account of it ought surely to be taken by the trade-union leaders. It would seem unreasonable that because it was not the custom to employ women in shipbuilding before the war, it should be made illegal to employ them in lens grinding after the war.¹

The women point out that they will not be the only ones to suffer under this bill. If turned out of the new trades there will be nothing left to them but a return to the prewar sweated trades formerly open to women, which will mean not only unspeakable hardship to the women, but a serious loss of productive power to the nation. In introducing the bill, Sir Robert Horne said that there were records of between 30,000 and 40,000 departures from prewar customs, and that 75 per cent of these were cases in which women had been allowed to work on machines on which previously men alone were

¹ The Common Cause, June 11, 1919.

employed, or other departures of that kind. Evidently, then, the women contend, the exclusion of women from these new openings was the principal prewar practice which it was desired to restore. But in 1918, they point out, there were close upon 400,000 women employed in the engineering trades who were not directly substituted for men, and who therefore represented an addition to the productive forces of the nation, not a mere substitution of one worker for another. Was it possible to exclude such a body without seriously impeding output? Women, they hold, had shown themselves well fitted for many kinds of engineering work; was it in the real interest of the country to refuse to make use of their ability in such lines, and to force them back into occupations already overcrowded?

The labor men in general have objected strenuously to any alteration or amendment of the bill, and make light of the women's fears. They maintain that as soon as the bill is passed, the men and employers will have to make agreements as to its carrying out and in these the women will be taken care of. Of course, women can not be excluded from such engineering work as they did before the war, but beyond this, the defenders of the bill insist, they may be sure of fair and generous treatment.

I find a general agreement among trade-unionists that women's work in engineering is certain to increase, and, to say the least of it, a general willingness to accept that fact. I believe that there is a substantial readiness to come to terms, and to be perfectly fair to the women's claims.¹

Such representations do not satisfy the women, who do not share this complete confidence in the generosity of the men. In effect they say that if the men are so willing to deal fairly with women, why should they object to an amendment exempting from the scope of the bill the new trades which have been built up since the war began, or in some other way safeguarding women? Their scepticism has been increased by several incidents; for instance:

At Hapton in Lancashire a magneto industry has recently been established, entirely by the labor of women. It has been very successful; the women like the work, and the local firm which has employed them wishes to go on doing so. But recently there was a mass meeting of the Allied Engineering Trades of the district, and it was decided that on May 24 all females must cease work. The reasons given for this decision were that there was a large amount of unemployment in the engineering trades in the district, and that there was also great general unemployment among men. Of the women employed, some were doing highly skilled work, which the meeting considered ought to be done by the skilled men, and some were doing semi-skilled work on small machines which the meeting thought ought to be given to unemployed semiskilled men.²

This, after all, represented the attitude of the workers of only one locality. Far more significant was the action of the Amalgamated

¹ G. D. H. Cole, in the *Daily Herald* (London), June 20, 1919.

² *The Common Cause*, May 30, 1919.

Society of Engineers, the strongest of the engineering federations, which on July 5, 1919, voted to refuse to admit women to its society, on the double ground that the entrance of women in industry inevitably tends to bring down wages, and that the trades covered by their amalgamation "were not such that general entry into them by women was conducive to women's best interests."¹

In spite, however, of the protests of the spokesmen of the women, the bill passed, without serious amendment, its third reading in the House of Commons shortly before Parliament adjourned for its summer recess, and there seemed little probability that it would receive any alterations in the House of Lords.

Industrial Conditions in Belgium.²

BEGINNING with March 15, 1919, the Belgian Labor Office resumed the publication of its official organ "Revue du Travail." The preface to this first number says:

During 52 months the devastation within the country begun by the German armies under the régime of occupation has been systematically continued. The details of that work of economic ruin, dissimulated in so far as possible by the perpetrators, have been gathered or collected in a fragmentary manner only. It is necessary upon the liberation of the country to institute investigations without delay which will furnish the authorities data to enable them to estimate the extent of the destruction. The investigations undertaken by different bureaus and on different lines are as yet incomplete. Before taking up the regular course of presenting industrial conditions, the Revue gives a résumé of the situation in which the nation's industrial conditions were found immediately after the enemy evacuated.

A series of reports prepared by labor inspectors and other observers will be given. There has been no concerted plan adopted in preparing these reports. They are entirely the work of correspondents, prepared at various times and under different circumstances from notes taken at great risks and perils. They will be looked upon by the enemy with chagrin, as every possible effort has been made to suppress them. In many cases their efforts were successful. It must be remembered that owing to death, deportation, and exile the office force has been considerably decreased. For all these reasons the work undertaken in these reports will represent but a modest contribution to the study of the ruin wrought in our national industry during the war.

Mons.

During the first month of the war the coal mines in the Basin of Mons closed. The miners who remained in the district obtained work. About the middle of the following September work was resumed for three days a week. Wages remained the same as before the war. When the scarcity of food began to be felt, work was increased

¹ Daily Herald (London), July 7, 1919.

² Summarized from Revue du Travail, Publiée par le Ministère de l'Industrie, du Travail et du Ravitaillement, Brussels, Mar. 15, 1919. Conversions from francs to United States money have been made in this article on the basis of 1 fr.=19.3 cents.

to four or even five days a week, wages were increased, and financial aid was extended to the miners. These measures permitted them to live under relatively favorable conditions during the period of occupation. At all mines stores selling the most necessary provisions at or below cost were established. Some degree of protection was afforded the miners because the Germans were in great need of coal. Besides the miners, employees in cement works and phosphate quarries, and woodmen, were protected. All were compelled by menaces of every kind to provide material for the enemy. Work was almost normal. A few insignificant strikes were reported.

The means of communication were poor and the transportation service encountered the greatest difficulties in providing materials. Nevertheless the operation of gas furnaces and supplies for factories still in operation and fuel for private use were assured.

Mining Conditions.

The production of coal in 1914 was 3,968,316 short tons; in 1915, 3,637,623 short tons; and in 1916, 4,078,547 short tons. Coal was furnished for domestic consumption at a price below that charged for foreign trade. The mine operators conceded financial and other aid to employees amounting in 1914 and 1915 to 1,300,000 francs (\$250,900). In 1915 the central coal office was established for the sale of coal for domestic consumption and in addition for filling requisitions for the German Army. All foreign contracts were canceled. In 1916 the unemployment benefits granted miners became more general and included not only miners but families of miners, soldiers, and school-teachers. During the year such benefits amounted to 4,300,000 francs (\$829,900) and in 1917 to 5,600,000 francs (\$1,080,800). During 1917 wages were increased 10 per cent in April, 15 per cent in July, and 25 per cent in October. The price of coal was advanced 2 francs (38.6 cents) in July and from 6 to 10 francs (\$1.16 to \$1.93) in November.

The demands of the army were constantly increasing and more and more of the coal produced was held for its use. Wages increased 25 per cent in January in 1918 and 25 per cent in the following July. In March a strike was declared because the Germans were deporting children under 17 years of age. Miners were thereupon arrested and held until they agreed to resume work.

About the same time the national food bureau diminished the supply of bread. The Germans, however, made an allowance to the miners. On October 24, 1918, the mines were completely shut down. Horses were brought out of the mines and work was not again resumed till December 15. Some shipments have been made

by rail, but many of the roads have been destroyed and difficulty has been encountered in reorganizing the railroad system. Shipment by canal has also been impeded because of the destruction of bridges and locks.

After the order to cease mining was issued on October 24, 1918, the Germans removed the mine machinery. It has been necessary to replace this, and in many cases it could not be found until after many weeks of search. No one doubts that the intention of the Germans to blow up the mines was frustrated just in time, and it is said that "only the withdrawal of Ludendorff saved our mines."

The shutdown from October 24 to December 15 worked great injury to the mines. Certain mines suffered greatly. Nearly all have been subject to great damage, inundations, deterioration of machinery, and loss of materials. Almost everything necessary for resuming operations is unobtainable because of the scarcity of supplies, and, if securable, the price is exorbitant. An exodus of miners is seriously considered. As a whole present conditions are much less favorable than generally represented.

In various sections coke ovens ceased operations during the war, and the Germans requisitioned most of the product of those still running. The price of coke advanced from 19 francs and 23 francs (\$3.67 and \$4.44) in August, 1914, to 67.5 francs and 77.5 francs (\$13.03 and \$14.96) in December, 1918. Even at short distances from the ovens the cost of transportation was doubled; in fact, the purchaser was generally compelled to deliver his own purchases.

Phosphate mines were requisitioned by the Germans and new and prepared phosphate could be delivered for domestic purposes only upon the authority of the administration. In some cases the operators refused to work their plants, but finally, in order to prevent sequestration and waste, a compromise was made by which 25 per cent of the production was reserved for Belgian agriculture. In other mines and quarries work was abandoned.

The Germans took possession of the rolling mills (*Jemappes*), expelled the proprietors, and operated the mills for their own purposes. Upon the withdrawal of the German troops the railroads were blown up, causing considerable damage to the mills. The rolls and other machinery were dismantled and carried away during the war, and at the time of their departure the Germans carried away the gearings, materials, steel, and tools. The canal upon which the mills depended, owing to the destructive work of the Germans, has been lowered 2 meters (6.6 feet). Time will be required to place the mills in working condition. At Nimy the rolling apparatus was dismantled and shipped to Germany.

Antwerp.¹

During March, 1919, the provincial committee of Antwerp presented a report to the National Aid and Food Supply Committee in which it summarized the results of an investigation of labor conditions in that Province. The primary purposes of this investigation were to ascertain (1) the number of persons industrially employed immediately preceding the war, and the number employed in March, 1919; (2) the extent of unemployment due to the demands of the laborers, the lack of raw material, and the destruction or damage to establishments and the removing of machinery; and (3) the measures necessary to resume operation.

Fourteen communes were visited and the industries covered included 15 of the more important groups. The total number of unemployed in these communes was found to be 25,076. The number of families to which aid was furnished because of unemployment was 18,421, with a total of 66,817 persons benefited. The number of persons working in 14 groups of industry before the war ranged from 20,700 to 21,700; in March, 1919, this number had dwindled to 2,300. Positions were available for 2,800 persons in March, 1919, and it was estimated that positions might be available for 7,400 persons in from 3 to 6 months.

A table follows showing the wages paid before the war and in March, 1919, generally for restoration and repair work; also the minimum wages demanded by employees and the wages offered by employers:

HOURLY WAGES BEFORE THE WAR AND IN MARCH, 1919, MINIMUM WAGES DEMANDED, AND WAGES OFFERED BY EMPLOYERS, PROVINCE OF ANTWERP, BELGIUM, BY INDUSTRY.

Wages of skilled employees.

Industry.	Before the war.	March, 1919.	Minimum demanded.	Wages offered.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	
Shipyards.....	9.65 to 13.51	16.41 to 24.13	24.13	50 per cent increase.
Metallurgical.....	9.65 to 11.58	14.48 to 19.30	24.13	Increase. ²
Paper (Morrees).....	14.48 to 16.41			Increase. ²
Cement and brick making.....	5.79 to 6.18	19.30	19.30	Increase. ²
Furniture.....	9.65	19.30	24.13	50 to 100 per cent.
Weaving.....	4.83 to 8.69	7.72 to 12.55		
Boots and shoes:				
Males.....	7.72 to 9.65			Increase. ²
Females.....	4.83 to 5.40			Increase. ²
Distilleries.....	12.55 to 15.44			Increase. ²
Food preparations:				
Males.....	6.76	9.65		Increase. ²
Females.....	2.70			Increase. ²
Diamond working.....	23.16	23.16		Increase. ²
Tobacco:				
Males.....	6.76 to 11.58			50 per cent increase.
Females.....	3.86 to 5.79			50 per cent increase.
Oleomargarine.....	5.79 to 6.76		19.30	Increase. ²
Musical instruments.....	3.86 to 7.72	6.76 to 19.30	19.30	Increase. ²
Lace.....	3.86 to 9.65		19.30	Increase. ²

¹ Summarized from *Revue du Travail*, Brussels, Apr. 1, 1919.

² Amount not stated.

HOURLY WAGES BEFORE THE WAR AND IN MARCH, 1919, MINIMUM WAGES DEMANDED, AND WAGES OFFERED BY EMPLOYERS, PROVINCE OF ANTWERP, BELGIUM, BY INDUSTRY—Concluded.

Wages of unskilled employees.

Industry.	Before the war.	March, 1919.	Minimum demanded.	Wages offered.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	
Shipyards.....	5.79 to 7.72	11.58 to 14.48	19.30	50 per cent increase.
Metallurgical.....	6.76 to 7.72	.....	19.30	Increase. ¹
Paper.....	5.79 to 6.76	8.69 to 10.62	24.13	30 to 50 per cent.
Paper, Gevaert.....	7.72 to 13.51	13.51 to 25.09	19.30	50 to 100 per cent.
Paper, cards.....	5.79 to 8.69	12.55 to 15.44	19.30 to 22.20	50 per cent increase.
Furniture, apprentices.....	6.76	12.55	19.30	
Distilleries.....	5.79 to 7.72	.....	.....	Increase. ¹
Diamond working, helpers.....	4.83	9.65	.....	Increase. ¹

¹ Amount not stated.

Before the war the hours of labor were in general from 9 to 10½, except in establishments working through 24 hours, in which the work was divided into two shifts of 12 hours each. At the present time 8 to 10 hours constitute a day's work.

The report says that all employers agree to an increase of wages and generally are offering 50 per cent increase; and in some branches of industry 100 per cent increase is offered. In some instances these increases are to be considered as a compensation for the high cost of living and, because of the uncertainty of future working conditions, are not to be considered permanent. The demand of common labor for a minimum wage of 1 franc (19.3 cents) per hour is considered excessive and unreasonable.

There seems to be no difficulty as regards the fixing of hours constituting a day's work. Employers are generally willing to establish a basis of 9 or 10 hours and nonunion labor is quite favorably disposed to accept that schedule. In establishments working day and night the question of three shifts provokes some discord.

There is a lively opposition manifested everywhere by employers to the demands for a recognition of the union. The employers are willing to discuss labor conditions with their employees but not with foreign organizations which at times impose conditions not desired even by the employees.

The destruction of establishments and the damage to, or removal of, machinery and apparatus, render a resumption of work impossible under 6 months; and certain of the more important establishments will require one or two years of reconstruction work.

Causes of Unemployment.

Besides the physical conditions of the establishments the principal cause of unemployment is lack of raw materials, especially fuel. Other causes are: (a) Owing to the violent fluctuation in the market,

manufacturers hesitate to lay in a stock of materials and to accept contracts; and, in some cases, demands are so meager that the manufacturer must sell goods at great discount. (b) Lack of capital in small factories. (c) Uncertainty as to recovery of damages. The law for fixing damages designates that the value of 1914 shall be taken as the basis, with provision for adding somewhat to this value, but does not definitely determine the percentage to be added. As the price of articles has tripled and quadrupled it becomes a subject of great importance to the manufacturer who would reestablish his plant. (d) The impossibility of completing and filling a large number of contracts partly executed when the war began, without compensation for the greatly increased cost of production which is caused by the extremely excessive prices of materials.

Measures Necessary for Resumption.

In order to bring about a resumption of business there should be distribution of clothing and shoes, increase in rations, organization of trains and tramways for laborers, the reissue of laborers' coupons on tramways, and an issue of coupons for use of the unemployed in search of work. Other measures necessary are: Return of machinery, machines, accessories, etc., removed by the Germans (the location of much of which is known); financial advances on merchandise requisitioned by the Germans; importation of motors, electric apparatus, and copper removed, or at least materials necessary to replace them; modification of exportation regulations; regulations favoring importation of articles of prime necessity (especially manufactures); and the development of means of communication.

Ghent.¹

Ghent, recognized as the principal textile center, and an important manufacturing and commercial city, suffered severely from the almost complete closing of the frontiers and the suppression of all transportation and maritime commerce. This was principally due to the occupation of the country by the German army, but there were other causes, both general and specific, which produced a state of industrial inactivity in most of the industries. All have been more or less affected by requisition, seizure or removal of raw materials, manufactures, machinery, machines, tools, and electrical apparatus, gearings, copper vessels, printing presses, stocks of leather, rubber, copper, nickel, tin, and articles made from them, the disappearance of oils and lubricants, requisitions of horses, auto-

¹ Summarized for *Revue du Travail*, Brussels, Apr. 1, 1919, and June 15, 1919.

mobiles and trucks, and the failure to make payment for this mass of materials requisitioned. The industrial situation was also seriously affected by lack of a supply of fuel, increasing difficulties of transportation by rail, boat, or wagon, the seizure of chicory, beets, agricultural products, grains, etc., the interdiction of transporting cereals, potatoes, etc., and prohibition of the slaughtering of cattle and hogs.

Unemployment.

In the city of Ghent unemployment has increased in the later months, and in June, 1919, was greater than during the German occupation. Statistics relative to the amount of aid extended by the national committee clearly indicate the increase. In August, 1915, unemployment benefits were being paid to 32,682 persons supporting 60,285 persons in all. In February, 1916, the numbers had increased to 38,490 and 77,189, respectively; and in May, 1917, the number receiving unemployment grants was 42,568, with a total of 81,157 persons benefited. It should be stated that following May, 1917, the German officers required the population to perform labor, with the result that in September, 1918, the number of families to which benefits were paid dropped to 28,320, with 58,588 persons affected. A year later, in September, 1918, the figures again showed a larger number of unemployed, the families then receiving benefits numbering 32,267 and the persons affected numbering 82,722.

Unemployment reached its maximum during the German retirement when operations ceased in all industries formerly controlled by them. For the week of November 11, 1918, 36,617 families with 98,218 persons were in receipt of funds, since which time there has been a decrease. Early in April, 1919, the number of families in receipt of aid was 31,322, with 79,561 persons affected.

In normal times the number of employees affiliated with the unemployment fund is approximately 15,000, and in 1913 the number of days of unemployment amounted to 49,361. During the last five months of 1914 the number of days lost was 496,463, and for the four years following, 1,779,741, 2,790,986, 3,314,108, and 3,433,421, respectively. In 1914 the average unemployment per month was one-third of a day for each employee to whom benefits were paid. This average gradually increased until in May, 1917, it reached 18 days. In November, 1917, it was 15 days; in April, 1918, 11½ days; in November, 1918, 20 days; and in April, 1919, 18 days per member. Incomplete reports for May and June indicate a further decrease. In April, 1919, of 16,635 members of unions, 8,986 were entirely unemployed, and 1,753 were partially without employment, making 10,739 persons unemployed, caus-

ing a loss of 238,438 days. The following table shows the number of days of unemployment per member, by industries:

DAYS OF UNEMPLOYMENT PER MEMBER OF FUND PER YEAR, 1913 TO APRIL, 1919.

Industry.	1913	1914	1915	1916	1917	1918	1919	
							Four months.	Estimated for year.
Spinning, cotton.....	2.0	30.8	130.9	216.5	222.7	212.4	86.5	259.5
Weaving.....	1.9	34.0	67.6	187.0	231.0	205.9	87.7	263.1
Flax.....	.8	6.9	86.7	197.8	205.7	190.6	70.2	210.6
Metal working.....	4.0	40.0	55.1	58.0	65.6	60.5	42.5	127.5
Woodworking.....	4.6	42.2	63.3	56.9	63.5	66.8	34.5	103.5
Building.....	7.3	42.5	50.3	69.3	114.3	76.1	17.6	53.4
Clothing.....	.1	6.3	30.4	123.6	170.6	163.6	38.6	116.4
Printing, etc.....	1.9	49.1	91.8	92.6	91.4	80.1	27.1	71.3
Clerks, etc.....	.6	5.4	11.9	19.8	19.0	9.8	5.1	15.3
Not classified.....	1.3	6.6	52.5	115.6	125.5	130.3	53.7	161.1
Total.....	2.2	23.4	68.7	133.0	153.3	145.2	62.2	186.6

Even had there been work for all at the beginning of 1919, the discussion of the conditions for resumption of labor would have been incessant. From the latter part of November employees in certain branches of industry had been debating conditions of resumption, and disturbances had been in progress to prevent nonunion men from filling positions which union men had refused to accept until negotiations between employers and employees were ended. Up to the end of May there was not a week without strikes and conflicts, negotiations, and arbitration. These were practically ended by the close of May, and for the first time in the industrial history of Ghent, union officials were granted the right to deal with employers in nearly all trades, for the purpose of determining the conditions of labor.

Generally speaking the conditions under which work was to be resumed were: 100 to 200 per cent increase in wages over the standard paid before the war, with wages from 0.75 franc (14.5 cents) to 1 franc (19.3 cents) per hour for common labor, 1.25 francs (24.1 cents) to 1.50 francs (29 cents) for skilled labor, and often a bonus to compensate for the high cost of living. The hours of labor were fixed at nine per day.

Unionism.

There has been a continuously accentuated movement in favor of unionism, which has resulted in an unprecedented membership. The textile industry, which is almost completely organized, reported a large increase in membership—from 13,618 to 20,402, or 49.8 per cent.

During the German occupation meetings of labor organizations were prohibited. Their activities were greatly reduced but clandestine meetings were held and members made valiant efforts to pre-

serve their respective organizations, and the spirit of unionism was maintained. During the first weeks after evacuation the assemblies held throughout the country and the meetings of representatives of labor have attested a vitality even stronger than before the war.

The seventeenth congress of the Labor Union Party and independent unions was held at Brussels on January 12 and 13, 1919. The following demands were made to become applicable immediately:

Laborers will refuse to accept any work until an 8-hour day out of a 24-hour day is agreed upon, with the English week, i. e., Saturday afternoon off, and an increase of 100 per cent above prewar wages, and a minimum wage per hour of 1 franc [19.3 cents] for unskilled labor and 1.25 francs [24.1 cents] for skilled labor.

That an active propaganda in the whole country be waged to secure necessary reforms, including effective laws concerning social, unemployment, sickness, accident and old-age insurance.

That these reforms be inserted in the treaty of peace.

That the Minister of Labor shall be petitioned to obtain an immediate revision of the order relating to inspection service, so that labor may be directly represented.

It is made the duty of all organizations of labor to oppose all systems of wages involving premiums, piecework, task, and even profit sharing, and in general every method of remuneration other than a daily, weekly, or monthly wage.

Coal Mines.

The coal mines were closed for a period of 6 weeks after the armistice. Work when resumed was somewhat irregular, certain mines being operated but 3 days per week; but the situation has recently improved to some extent. Some mines are working 6 days per week, but with a reduced force. There is a good market, but transportation is difficult. Railroads are not in a position to furnish either the motive power or cars, and transportation by water, which had been the principal means for shipment, is impracticable until navigation is reestablished. The last increase in price of coal was made February 1, 1919. In the meantime wages had been increased 25 per cent. The price of coal, "run of mine," is about 60 francs (\$11.98) per ton (2,204 pounds). The price after the close of the war of 1870 was not higher than 40 francs (\$7.72).

In some sections the miners have adopted a new plan of organization by forming large unions after the English system. In 1912 unions were formed for each commune, with a district federation. The war reduced the number of members from 14,000 in 1914 to 4,000 or 5,000 paying dues in support of an insurance fund. The congress of miners in January last decided to form a national fund, as well as a strike fund for each basin.

Arbitration of Labor Disputes.¹

The Minister of Labor, under date of March 4, 1919, directed all labor inspectors to take cognizance of labor disputes, and immediately to get in contact with employers and employees or their representatives in cases where there is reason to believe that disputes threaten to cause a suspension of operation.

Their first duty is to determine the cause of disputes and then to propose arbitration, it being understood that each party shall agree to resume work during the process of arbitration. The following bodies may be proposed as arbitrators: (1) The council of labor and industry; (2) district committees, consisting of an equal number of employers and employees, recently formed to supervise the newly established labor exchange; and (3) the recently formed provincial supervisory committee. This last body is charged with the duties of arbitration in cases where the district arbitration board fails to reach a decision.

The Government orders that should the employees refuse arbitration, payment of benefits by local aid committees shall cease; but if the employers so refuse then the payment of unemployment benefits shall continue.

Effect of the Revolution on Labor, Output, and Costs of Production in Germany.

THE German Industrial and Trade Conference has submitted to the National Assembly the results of an inquiry among its members as to direct and indirect effects of the revolution on the conditions of labor and consequently on the production and exchange of goods. The *Deutsche Wirtschaftszeitung*² publishes the following summary of this highly significant compilation:

Wage Agitations.

Increases of wages have taken place everywhere. The figures mentioned show great variation, the advances being between 15 and 100 per cent over the wages paid before the revolution, and between 60 per cent and 400 per cent over the prewar wages. Considerable extra expenditure in wages was due to the introduction of the eight-hour day,³ and in industries which were thereby compelled to employ a third shift it amounted to not less than 50 per cent of the wages previously paid. Many reports state that the wage agitations are by no means ended, and that further demands are being made or expected.

¹ *Revue du Travail*, Brussels, Mar. 15, 1919.

² *Deutsche Wirtschaftszeitung*, Berlin, May 1, 1919.

³ See MONTHLY LABOR REVIEW for May, 1919, pp. 213-215.

Wage Strikes.

Apart from the great stoppages of work in the coal districts and in the large industrial centers, strikes for higher wages are only reported in isolated cases. Firms in many cases emphasize the fact that they voluntarily agreed to the demands of their workmen in order to avoid cessation of work and the consequently still greater losses. Few of the chambers of commerce express an opinion on the question as to whether the wages paid or demanded were justified in view of the cost of living, and the few replies hereon take the view that they were excessive. As regards their effect on the profitableness and continuance of the industries, the general opinion was that the wage demands were incompatible therewith and in some cases quite ruinous. Complaints were made of the inclination of the workmen to disregard wage agreements made and to put forward further demands in spite of binding, written settlements. Attention is frequently called to the fact that the incitement to exaggerated demands was given by ill-advised measures of the Government, special allusion being made to the increase in the railway men's wages and the fixing of shipyard workers' wages by the demobilization office, the high rates granted having given rise to difficulties with workers in other trades. The salaries of employees have also been everywhere increased. Owing to the reinstatement of returned soldiers, there is almost everywhere a surplus of clerks, and their maintenance has necessitated considerable sacrifices on the part of the industries.

Curtailment of the Hours of Labor.

The eight-hour day has everywhere been carried into effect. In many cases it is reported that its introduction was not severely felt, because the shortage of raw materials and coal in many places has led to a reduction of working hours even to under eight without official regulation. Apart from this, however, it is stated from Cassel, Chemnitz, Frankfort on the Oder, Plauen, and Dortmund, that the workers have demanded further reductions to 46 hours and less per week, and have partially succeeded therein. From Bayreuth and Frankfort on the Main the view is expressed that the variety of the economic conditions and the difference of the requirements in individual branches of industry make any uniform regulation of the hours of labor quite unworkable. Augsburg, Elberfeld, Frankfort on the Main, and Pforzheim think that the eight-hour day can be maintained in Germany only if it is introduced internationally, and from Elberfeld it is added that any international uniform regulation should apply only to those industries in which the eight-hour day appears necessary for the good health of the workers.

Diminution of Intensity of Work.

The assurance given in the past by the workers' representatives when demanding a reduction of working hours, that such reduction would in no case involve diminution of production, has undoubtedly not been borne out. The reports are almost unanimous that production has fallen off in most cases not only in proportion to the reduction in hours of labor, but even considerably beyond this, owing to less intensity in work. The reports from Altenburg and Stolp are more favorable, but only with respect to part of the industries in these districts. In No. 30 of the official publication, *Die Wirtschaftliche Demobilmachung*, there is a report from the Central Information Bureau: "Everywhere disinclination to work is reported; only West Prussia advises greater willingness for work." Among the reasons for the lessening of the intensity of labor, chief place is given to the abolition of piecework wages, also the excitement aroused by the political conditions, the altered conception of the relations between employers and workers, the insufficient nourishment, the long abstention from regular work, and the less apprehension of dismissal on account of the high unemployment

grants. As to the extent of the diminution, the estimates vary considerably. The most reliable figures come from the coal mining industry, which puts the reduction in output at 40 per cent. Other estimates vary between 20 and 50 per cent. Greater decreases are reported by the potash mines of the Hildesheim district (at least 60 per cent), and the Rottweil scientific apparatus industry (90 per cent).

Concerning the effect of the abolition of piecework wages, a Kiel shipyard states that a gang of workmen fitted, on piecework, 32 rivets, as against 19 in the same time when paid by the day. A driller bored on piecework 100 holes per hour, and on daily wage 39. A smith required on piecework 3 working hours to produce a valve, and on daily wage 4 hours. On the whole, the shipyard puts the diminution in output in the shops at 20 to 25 per cent, and in outside work at 40 to 50 per cent. The Eidelstedt Wire Works, near Hamburg, says that the wiredrawers produced on piecework about 950 kilograms [2,094.4 pounds] of a specified kind of wire in 9½ hours, while on daily wage only about 600 kilograms [1,322.8 pounds] were produced in 8 hours. The Elbing firm, Loeser & Wolff, states, however, that it has not noted any decrease in output by its workmen, who were formerly on piecework. A sawmill in the Ravensburg district reports that for unloading a car in war time 4 workmen required 3 hours, while now 6 workmen take 2 days. The unwillingness of the younger workmen to work is specially complained of. An Altona firm writes that they regard work as a condescension on their part, and raise all sorts of objections, such as refusal to work in the open during rain, even if the rain is only slight, or if the factory is not warm enough, or to work faster than would suit a convalescent, or to take orders from any foreman.

Influence on Output, Profits, and Ability to Compete.

That the above-described conditions, in conjunction with the lack of coal and raw materials and the transport difficulties, have most seriously prejudiced the production of goods is emphasized from all sides. Plauen says that, practically, one can no longer speak of a production in the economic sense. In all directions a decline in production is noted, computed in many cases at 30 to 40 per cent under the prerevolution output. There is general agreement that in these circumstances there can hardly be any question of the profitability of the industries. A Duisburg machinery works writes that the disbursements for wages rose from an average of 1,052 marks¹ per workroom in October, 1918, to an average of 1,524 marks in December, 1918, an advance of 45 per cent, and figuring for a whole year, this increase in wages would require an amount double the net profit of the best war year, and thrice the sum of the profits of the three best peace years. From Berlin figures are forwarded from companies which show that many times the dividends paid would be required to satisfy the present wage demands of the workmen, and the directors consider it absolutely impossible to earn these wages or dividends by raising their selling prices correspondingly. An Essen company puts its increased expense at seventeen times the former dividend, and a Duisburg firm writes that from its own standpoint it would be best to close down its works in order to avoid the heavy monthly losses the firm is incurring. Frankfurt on the Main remarks that in the case of many establishments their shutting down is only a question of time. The Peiner Rolling Mills compute the wage outlay per ton of crude steel in October, 1918, at 14.82 marks, in November at 26.88 marks, and in December at 41.26 marks. The Harburg jute industry states as an instance of the rise in production costs through increased wages that 1 kilogram [2.2 pounds] of yarn and 1 kilogram of fabric before the war cost 11 and 10.4 pfennigs respectively, whereas in December, 1918, the cost rose to 64.8 and 40.4 pfennigs respectively.

¹ Owing to the greatly depreciated value of the mark, conversions into United States money are not made in this article. Normally the value of the mark is 23.3 cents.

Complaints are general that the incessant wage agitation and the political uncertainty make regular calculations impossible, and the unanimous opinion is that a continuance of present conditions will render it impracticable to compete with foreign industries, and that German exporting industries, such as the textile and chemical industries, will be ruined. Frankfort on the Main reports that America especially has accumulated stocks during the war and will, as soon as ship room is obtainable, flood Europe with her production. Even under former conditions, American manufactures, for instance, machinery, were frequently cheaper than German goods, but in view of the enormous advances in prices of German products, mostly due to the large increases in wages, this will be far more the case in the future. In the German steel industry, for example, the reopening of the frontiers is looked forward to with the apprehension of early and complete ruin, as the industry in the Entente countries is even now making deliveries in the occupied territory at considerably lower prices. Many reports are being received of unfavorable experiences in foreign markets. Pforzheim reports that numerous foreign orders in the fancy goods industry have been canceled, owing to prices being too high. Dessau writes that several machinery factories state that in Holland and Switzerland decidedly cheaper offers have been made from England and America, and also from Sweden, and a Duisburg machinery factory writes that deliveries to foreign countries appear to be impracticable, as English works, with which they competed very successfully during the war, are now able to sell 33½ per cent cheaper than they. The factory's agents in Holland for mining machinery informed the factory at the beginning of January that not only their prices but German prices generally were much too high.

The above depicts such a state of things as must fill every reflective mind with grave anxiety as to the future, and no one can avoid the conviction expressed by the German Industrial and Trade Conference that any further advance on such disastrous lines must bring industry and trade, and inevitably also the entire country and the entire German nation quickly not only to the brink, but over the precipice of ruin.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

THE retail price of 22 articles¹ of food combined for which consumption weights are secured by the Bureau, increased 1 per cent in the United States in August as compared with July, and 3 per cent as compared with December, 1918. Since last month, the 5 cuts of beef show a slight decrease for the United States as a whole, but in the cases of individual cities there are several instances where an increase is shown. Of the total number of articles for which prices are obtained, 18, for which comparison may be made for the year period, cost less in August than they cost in July. Onions declined 20 per cent; cabbage, 15 per cent; plate beef and lamb, 5 per cent each; chuck roast, 4 per cent; sirloin steak, round steak, and rib roast, 3 per cent each; bacon, flour, corn flakes, baked beans, canned corn, canned peas, and canned tomatoes, 1 per cent each. Hens, Cream of Wheat, and bananas declined less than five-tenths of 1 per cent. Lard was the same price in August as in July.

Twenty-four articles increased in price since last month: Eggs and rice, 6 per cent each; Crisco, potatoes, and raisins, 4 per cent each; evaporated and fresh milk, coffee, and prunes, 3 per cent each; pork chops, butter, corn meal, rolled oats, navy beans, and sugar, 2 per cent each; canned salmon, oleomargarine, cheese, bread, macaroni, and oranges, 1 per cent each. Ham, nut margarine, and tea show an increase of less than five-tenths of 1 per cent.

The increase of the 22 articles¹ of food, combined, for the year period, August, 1918, to August, 1919, was 12 per cent. Of the 28 articles for which prices for August 15, 1918, are given, 21 were higher on August 15, 1919, than on the former date, the increase ranging from 60 per cent. for prunes to 1 per cent for sirloin steak. Seven articles decreased during this period.

¹ Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, tea.

AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE AUG. 15, 1919,
COMPARED WITH AUG. 15, 1918, AND JULY 15, 1919.

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (−) Aug. 15, 1919, compared with—	
		Aug. 15, 1918.	July 15, 1919.	Aug. 15, 1919.	Aug. 15, 1918.	July 15, 1919.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	41.5	43.4	42.1	+ 1	− 3
Round steak.....	do.....	39.6	40.7	39.5	(¹)	− 3
Rib roast.....	do.....	32.6	33.5	32.4	− 1	− 3
Chuck roast.....	do.....	28.3	27.7	26.6	− 6	− 4
Plate beef.....	do.....	21.7	20.3	19.3	−11	− 5
Pork chops.....	do.....	42.2	46.2	46.9	+11	+ 2
Bacon.....	do.....	54.0	58.1	57.7	+ 7	− 1
Ham.....	do.....	48.5	56.7	56.9	+17	(²)
Lamb.....	do.....	36.9	38.2	36.4	− 1	− 5
Hens.....	do.....	38.6	42.0	41.8	+ 8	(¹)
Salmon (canned).....	do.....	30.2	32.1	32.3	+ 7	+ 1
Milk, fresh.....	Quart.....	13.6	15.0	15.5	+14	+ 3
Milk, evaporated (unsweetened).....	15-16-oz. can.....		15.9	16.3		+ 3
Butter.....	Pound.....	53.9	62.8	61.1	+19	+ 2
Oleomargarine.....	do.....		41.9	42.5		+ 1
Nut margarine.....	do.....		35.7	35.8		(²)
Cheese.....	do.....	34.6	43.0	43.5	+26	+ 1
Lard.....	do.....	33.1	42.0	42.0	+27	(³)
Crisco.....	do.....		38.9	40.5		+ 4
Eggs, strictly fresh.....	Dozen.....	53.6	56.6	60.2	+12	+ 6
Bread.....	Pound ⁴	9.9	10.0	10.1	+ 2	+ 1
Flour.....	do.....	6.8	7.5	7.4	+ 9	− 1
Corn meal.....	do.....	6.8	6.5	6.6	− 3	+ 2
Rollod oats.....	do.....		8.7	8.9		+ 2
Corn flakes.....	8-oz. pkg.....		14.1	14.0		− 1
Cream of Wheat.....	28-oz. pkg.....		25.2	25.1		(¹)
Macaroni.....	Pound.....		19.3	19.4		+ 1
Rice.....	do.....	13.4	14.6	15.5	+16	+ 6
Beans, navy.....	do.....	17.1	12.1	12.3	−28	+ 2
Potatoes.....	do.....	3.9	4.8	5.0	+28	+ 4
Onions.....	do.....	5.5	9.8	7.8	+42	−20
Cabbage.....	do.....		6.2	5.3		−15
Beans, baked.....	No. 2 can.....		17.3	17.1		− 1
Corn, canned.....	do.....		19.3	19.1		− 1
Peas, canned.....	do.....		19.2	19.1		− 1
Tomatoes, canned.....	do.....		16.1	15.9		− 1
Sugar, granulated.....	Pound.....	9.3	10.9	11.1	+19	+ 2
Tea.....	do.....	65.8	70.5	70.7	+ 7	(²)
Coffee.....	do.....	30.1	46.2	47.8	+59	+ 3
Prunes.....	do.....	17.1	26.5	27.4	+60	+ 3
Raisins.....	do.....	15.3	17.3	18.0	+18	+ 4
Bananas.....	Dozen.....		39.2	39.1		(¹)
Oranges.....	do.....		53.4	53.7		+ 1
22 weighted articles combined.....					+12	+ 1

¹ Decrease of less than five-tenths of 1 per cent.

² Increase of less than five-tenths of 1 per cent.

³ No change in price.

⁴ Baked weight.

During the six-year period, August, 1913, to August, 1919, the price of 22 articles of food combined shows a 91 per cent increase.

Articles increasing 100 per cent or over are: Ham, 100 per cent; bacon, 105 per cent; pork chops, 115 per cent; corn meal, 120 per cent; flour, 124 per cent; lard, 161 per cent; and potatoes, 163 per cent.

AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE AUG. 15 OF EACH SPECIFIED YEAR COMPARED WITH AUG. 15, 1913.

Article.	Unit.	Average retail price Aug. 15—							Per cent of increase (+) or decrease (—) Aug. 15 of each specified year compared with Aug. 15, 1913.					
		1913	1914	1915	1916	1917	1918	1919	1914	1915	1916	1917	1918	1919
Sirloin steak.....	Pound.....	Cts. 26.5	Cts. 27.8	Cts. 26.5	Cts. 28.4	Cts. 32.9	Cts. 41.5	Cts. 42.1	+ 5	(1)	+ 7	+ 24	+ 57	+ 59
Round steak.....	do.....	23.3	25.2	23.8	25.7	30.8	39.6	39.5	+ 8	+ 2	+ 10	+ 32	+ 70	+ 70
Rib roast.....	do.....	20.1	21.4	20.4	21.8	25.5	32.6	32.4	+ 6	+ 1	+ 8	+ 27	+ 62	+ 61
Chuck roast.....	do.....	16.5	18.1	16.7	17.7	21.7	28.3	26.6	+ 10	+ 1	+ 7	+ 32	+ 72	+ 61
Plate beef.....	do.....	12.2	13.1	12.3	12.9	17.2	21.7	19.3	+ 7	+ 1	+ 6	+ 41	+ 78	+ 53
Pork chops.....	do.....	21.8	25.0	21.6	24.3	34.4	42.2	46.9	+ 15	- 1	+ 11	+ 58	+ 94	+ 115
Bacon.....	do.....	28.1	28.7	27.0	29.3	43.0	54.0	57.7	+ 2	- 4	+ 4	+ 53	+ 92	+ 105
Ham.....	do.....	28.5	29.1	26.2	32.6	39.5	48.5	56.9	+ 2	- 8	+ 14	+ 39	+ 70	+ 100
Lamb.....	do.....	18.9	20.6	20.5	23.1	29.7	36.9	36.4	+ 9	+ 8	+ 22	+ 57	+ 95	+ 93
Hens.....	do.....	21.5	22.2	20.5	23.8	27.9	38.6	41.8	+ 3	- 5	+ 11	+ 30	+ 80	+ 94
Salmon (canned).....	do.....			19.8	20.2	27.1	30.2	32.3						
Milk, fresh.....	Quart.....	8.8	8.9	8.8	9.0	11.4	13.6	15.5	+ 1	(1)	+ 2	+ 30	+ 55	+ 76
Milk, evaporated(un-sweetened).	15-16 oz. can.							16.3						
Butter.....	Pound.....	35.5	36.2	33.5	36.6	47.6	53.9	64.1	+ 2	- 6	+ 3	+ 34	+ 52	+ 81
Oleomargarine.....	do.....							42.5						
Nut margarine.....	do.....							35.8						
Cheese.....	do.....	22.0	22.8	22.7	24.5	32.8	34.6	43.5	+ 4	+ 3	+ 11	+ 49	+ 57	+ 98
Lard.....	do.....	16.1	15.6	14.0	21.0	27.7	33.1	42.0	- 3	- 13	+ 30	+ 72	+ 106	+ 161
Crisco.....	do.....							40.5						
Eggs, strictly fresh.....	Dozen.....	33.0	33.4	30.4	36.4	46.0	53.6	60.2	+ 1	- 8	+ 10	+ 39	+ 62	+ 82
Bread.....	Pound ²	5.6	6.3	7.1	7.2	20.2	9.9	10.1	+ 13	+ 27	+ 29	+ 82	+ 77	+ 80
Flour.....	Pound.....	3.3	3.5	4.0	4.4	7.5	6.8	7.4	+ 6	+ 21	+ 33	+ 127	+ 106	+ 124
Corn meal.....	do.....	3.0	3.2	3.3	3.3	6.6	6.8	6.6	+ 7	+ 10	+ 10	+ 120	+ 127	+ 120
Rolled oats.....	do.....							8.9						
Corn flakes.....	8 oz. pkg.....							14.0						
Cream of Wheat.....	28 oz. pkg.....							25.1						
Macaroni.....	Pound.....							19.4						
Rice.....	do.....	8.7	8.8	9.1	9.1	10.6	13.4	15.5	+ 1	+ 5	+ 5	+ 22	+ 54	+ 78
Beans, navy.....	do.....			7.6	12.1	19.2	17.1	12.3						
Potatoes.....	do.....	1.9	1.9	1.4	2.5	3.6	3.9	5.0	(1)	- 26	+ 32	+ 89	+ 105	+ 163
Onions.....	do.....			3.1	5.0	4.6	5.5	7.8						
Cabbage.....	do.....							5.3						
Beans, baked.....	No. 2 can.....							17.1						
Corn, canned.....	do.....							19.1						
Peas, canned.....	do.....							19.1						
Tomatoes, canned.....	do.....							15.9						
Sugar, granulated.....	Pound.....	5.6	7.8	6.7	8.5	9.9	9.3	11.1	+ 39	+ 20	+ 52	+ 77	+ 66	+ 98
Tea.....	do.....	54.4	54.7	54.6	54.6	60.2	65.8	70.7	+ 1	(2)	(2)	+ 11	+ 21	+ 30
Coffee.....	do.....	29.8	29.7	29.9	29.9	30.5	30.1	47.8	(4)	(2)	(2)	+ 2	+ 1	+ 60
Prunes.....	do.....			13.5	13.4	16.2	17.1	27.4						
Raisins.....	do.....			12.5	12.8	14.8	15.3	18.0						
Bananas.....	Dozen.....							39.1						
Oranges.....	do.....							53.7						
22 weighted articles combined.									+ 6	- 1	+ 13	+ 48	+ 70	+ 91

¹ No change in price.² Baked weight.³ Increase of less than five-tenths of 1 per cent.⁴ Decrease of less than five-tenths of 1 per cent.

RELATIVE RETAIL PRICES OF FOOD IN THE UNITED STATES ON JULY 15 AND AUG. 15, 1919, AND AUG. 15, 1913, 1914, 1915, 1916, 1917, AND 1918.

[The relative price is the per cent that the average price on the 15th of each month is of the average price for the year 1913.]

Article.	Unit.	1919		Aug. 15—					
		July 15.	Aug. 15.	1913	1914	1915	1916	1917	1918
Sirloin steak.....	Pound..	171	166	104	110	104	112	130	163
Round steak.....	..do.....	183	177	104	113	107	115	138	178
Rib roast.....	..do.....	169	164	102	108	104	111	129	165
Chuck roast.....	..do.....	173	166	103	109	103	110	136	177
Plate beef.....	..do.....	168	160	101	107	101	107	134	179
Pork chops.....	..do.....	220	223	104	119	103	116	164	201
Bacon.....	..do.....	215	214	105	107	100	108	160	200
Ham.....	..do.....	211	212	106	108	98	121	147	180
Hens.....	..do.....	197	196	101	104	97	112	131	181
Milk.....	Quart..	169	174	99	100	99	101	128	153
Butter.....	Pound..	164	167	92	94	88	95	124	141
Cheese.....	..do.....	195	197	100	103	103	111	148	157
Lard.....	..do.....	266	266	102	99	89	133	176	209
Eggs, strictly fresh.....	Dozen..	164	174	96	96	88	105	134	155
Bread.....	Pound ¹ .	175	177	100	112	126	128	182	174
Flour.....	Pound..	227	224	101	106	124	134	229	206
Corn meal.....	..do.....	217	220	100	105	108	110	219	227
Rice.....	..do.....	168	178	100	101	104	105	122	154
Potatoes.....	..do.....	282	294	109	111	82	141	206	229
Sugar, granulated.....	..do.....	198	202	102	143	123	155	181	169
Tea.....	..do.....	130	130	100	101	100	100	111	121
Coffee.....	..do.....	155	160	100	100	101	100	102	101
All articles combined.....	.....	190	192	101	107	100	113	149	171

¹ Baked weight.

Retail Prices of 22 Articles of Food, Combined, for the United States, by Months.

The chart on page 52 shows the curve in the retail cost of 22¹ of the most essential foods, for the United States for each month from January, 1913, to and including August, 1919. The logarithmic chart is used because the percentages of increase or decrease are more clearly seen than on an arithmetic chart.²

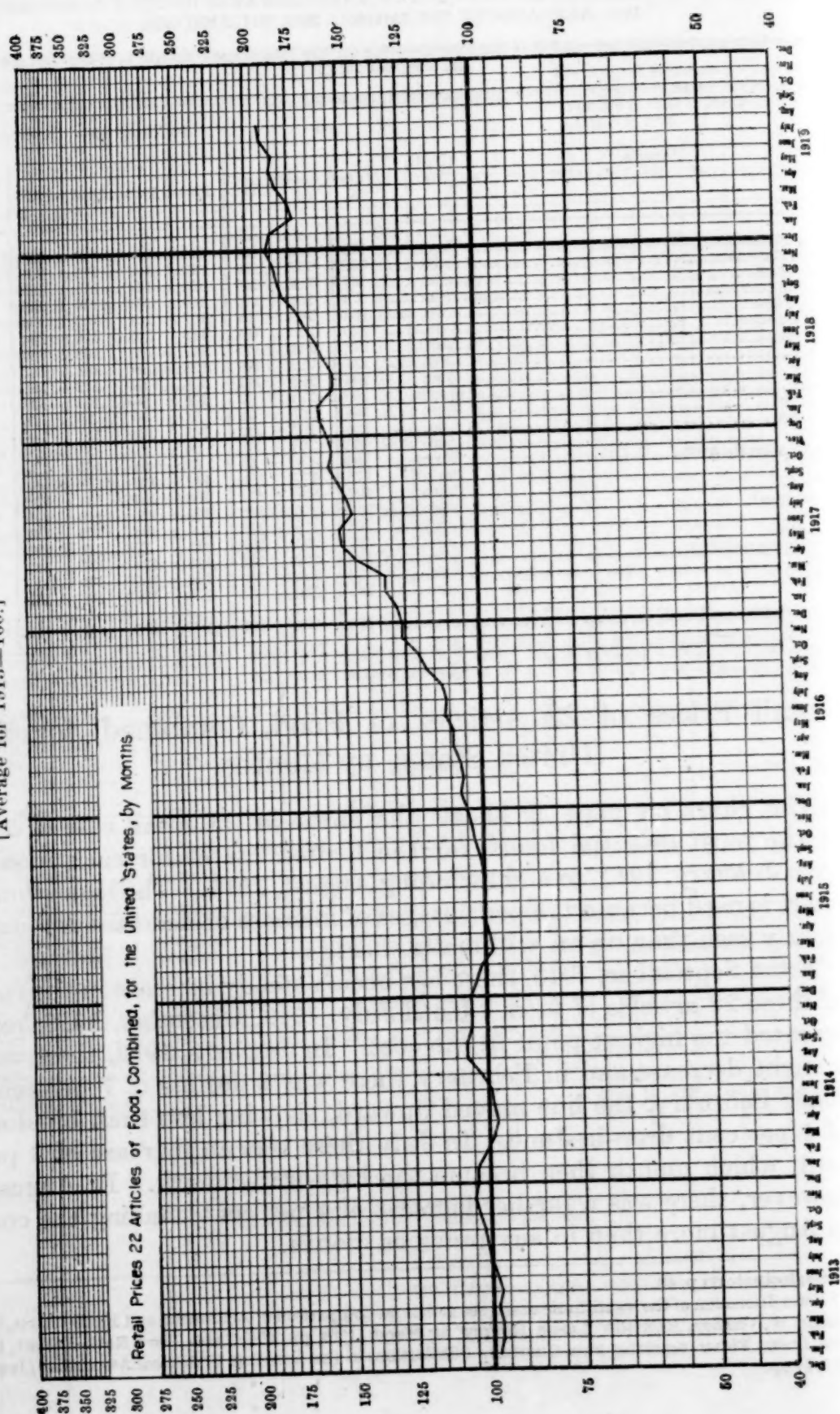
From September, 1915, there has been a steady increase in the cost of these 22 articles of food. Until July, 1919, December, 1918, represented the highest point in the cost. In January, 1919, there was a slight decrease and in February there was a decline of 7 per cent. Since February, the line moved upward, showing less than one-half of 1 per cent drop in June. In July there was an increase of 3 per cent, which month then became the high-water mark. In August, however, there was a further increase of 1 per cent, making the cost in August more than in any previous month.

¹ See footnote on p. 48.

² For a discussion of the logarithmic chart, see article on Comparison of Arithmetic and Ratio Charts, by Lucian W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34; also The "Ratio" Chart, by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pp.

CHANGES IN RETAIL PRICES OF 22 ARTICLES OF FOOD IN THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO AUGUST, 1919.

[Average for 1913=100.]



Effort is made by the Bureau to secure quotations on similar grades of commodities in the different cities. There are, however, some local customs which must be considered when any comparison is made of the prices in the different cities. The method of cutting sirloin steak in Boston, Mass.; Manchester, N. H.; Philadelphia, Pa.; Providence, R. I.; and Portland, Me., differs from that in other cities. The cut known as "sirloin" in these five cities would be in other cities known as "porterhouse." There is in these cities, owing to the methods of dividing the round from the loin, no cut that corresponds to that of "sirloin" in other cities. There is also a greater amount of trimming demanded by the retail trade in these cities than in others. This is particularly true of Providence, R. I. These, together with the fact that the beef sold in these cities is of better grade, are the main reasons why the retail prices of beef in these cities are higher than in others.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON

[The prices shown in the tables following are computed from reports sent monthly to the Bureau by retail

Article.	Unit.	Atlanta, Ga.						Baltimore, Md.					
		August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb..	25.0	27.6	31.1	39.6	40.7	39.5	24.3	27.0	33.2	46.5	44.3	42.7
Round steak.....	Lb..	21.5	23.4	27.8	36.5	38.3	37.5	23.0	25.2	32.2	45.7	42.8	41.1
Rib roast.....	Lb..	20.1	20.3	22.9	31.3	31.4	29.9	19.3	20.4	25.8	36.6	34.3	33.7
Chuck roast.....	Lb..	15.5	17.1	19.6	25.9	24.4	23.8	16.0	17.0	23.0	31.3	28.7	28.1
Plate beef.....	Lb..	9.4	10.9	15.7	21.8	18.4	19.4	12.6	14.5	16.2	24.2	22.3	21.6
Pork chops.....	Lb..	23.5	26.8	33.4	42.4	42.9	44.3	19.3	23.2	35.2	46.0	48.9	47.8
Bacon.....	Lb..	32.0	33.6	42.9	57.8	61.0	61.0	26.3	24.4	42.2	51.3	53.7	53.6
Ham.....	Lb..	31.0	33.0	40.5	50.9	55.7	57.9	34.5	33.5	42.8	54.3	60.5	60.6
Lamb.....	Lb..	19.4	20.8	28.8	37.1	40.0	38.8	18.3	21.0	29.5	41.6	38.6	37.1
Hens.....	Lb..	20.2	21.8	23.2	35.3	36.4	37.3	21.2	21.7	29.5	42.7	46.9	46.0
Salmon (canned).....	Lb..	.....	.....	23.1	25.6	27.4	26.8	.....	.....	25.7	26.8	28.8	28.7
Milk, fresh.....	Qt.	10.0	10.0	13.3	20.0	20.0	20.0	8.8	8.7	10.8	13.0	14.0	15.0
Milk, evaporated (unsweetened).....	(²)	.....	.....	.....	.....	16.5	17.0	.....	.....	.....	.....	15.8	16.1
Butter.....	Lb..	37.1	37.7	49.7	57.9	68.3	69.1	36.7	37.3	49.6	56.3	66.0	67.8
Oleomargarine.....	Lb..	.....	.....	.....	.....	43.1	43.1	.....	.....	.....	.....	39.9	39.1
Nut margarine.....	Lb..	.....	.....	.....	.....	39.6	38.9	.....	.....	.....	.....	35.0	35.0
Cheese.....	Lb..	25.0	25.0	33.4	35.0	42.0	43.2	22.5	23.3	35.2	35.3	43.9	44.4
Lard.....	Lb..	16.1	17.0	27.1	34.0	43.3	43.7	15.0	14.5	26.8	32.4	41.2	41.9
Crisco.....	Lb..	.....	.....	.....	.....	35.5	38.7	.....	.....	.....	.....	39.8	40.2
Eggs, strictly fresh.....	Doz.	28.3	30.9	42.4	49.8	48.1	56.5	27.7	28.6	42.4	49.9	52.7	55.7
Rolled oats.....	Lb..	.....	.....	.....	.....	9.9	10.3	.....	.....	.....	.....	6.9	7.6
Bread.....	Lb. ³	6.0	5.9	10.2	10.0	10.0	10.0	5.4	5.7	8.9	9.7	9.6	9.6
Flour.....	Lb..	3.5	3.5	7.3	7.1	7.5	7.4	3.2	3.6	7.6	6.9	7.6	7.7
Corn meal.....	Lb..	2.6	2.9	6.3	5.7	5.8	6.2	2.5	2.5	6.2	6.5	5.8	5.8
Corn flakes.....	(⁴)	.....	.....	.....	.....	13.9	14.1	.....	.....	.....	.....	13.2	13.0
Cream of Wheat.....	(⁵)	.....	.....	.....	.....	25.5	25.4	.....	.....	.....	.....	23.1	23.2
Macaroni.....	Lb..	.....	.....	.....	.....	20.6	20.7	.....	.....	.....	.....	16.4	17.6
Rice.....	Lb..	8.6	8.6	10.7	13.9	14.3	16.1	9.0	9.0	10.8	13.0	14.3	15.4
Beans, navy.....	Lb..	.....	.....	19.0	18.8	14.3	14.1	.....	.....	18.6	17.8	12.3	12.5
Potatoes.....	Lb..	2.3	2.6	4.3	5.1	5.8	6.4	1.7	1.8	2.9	4.2	4.2	4.6
Onions.....	Lb..	.....	.....	6.1	6.5	10.5	9.7	.....	.....	4.6	5.5	7.7	7.3
Cabbage.....	Lb..	.....	.....	.....	.....	8.2	7.3	.....	.....	.....	.....	5.1	4.6
Beans, baked.....	(⁶)	.....	.....	.....	.....	16.6	16.3	.....	.....	.....	.....	15.8	15.5
Corn, canned.....	(⁶)	.....	.....	.....	.....	20.4	20.1	.....	.....	.....	.....	18.8	18.5
Peas, canned.....	(⁶)	.....	.....	.....	.....	20.6	20.4	.....	.....	.....	.....	18.5	17.8
Tomatoes, canned.....	(⁶)	.....	.....	.....	.....	14.0	14.1	.....	.....	.....	.....	14.6	14.5
Sugar, granulated.....	Lb..	5.9	8.0	10.7	9.4	12.4	12.1	5.1	7.3	9.5	9.0	10.7	10.8
Tea.....	Lb..	60.0	60.0	77.4	88.1	87.7	87.3	56.0	56.0	62.4	68.5	73.5	73.9
Coffee.....	Lb..	32.0	33.0	29.8	29.6	46.1	48.1	24.8	24.4	27.4	28.4	42.9	44.9
Prunes.....	Lb..	.....	.....	17.5	18.5	21.8	21.8	.....	.....	15.9	17.4	27.9	28.3
Raisins.....	Lb..	.....	.....	15.0	15.6	17.5	17.9	.....	.....	14.2	15.6	17.1	18.0
Bananas.....	Doz.	.....	.....	.....	.....	29.7	30.6	.....	.....	.....	.....	32.1	32.3
Oranges.....	Doz.	.....	.....	.....	.....	52.5	59.1	.....	.....	.....	.....	57.3	56.2

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

² 15-16 ounce can.

AUG. 15, 1913, 1914, 1917, 1918, 1919, AND JULY 15, 1919, FOR 19 CITIES.

dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Birmingham, Ala.						Boston, Mass.						Buffalo, N. Y.					
August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
28.1	29.4	35.5	41.4	44.2	42.6	35.8	40.6	42.9	57.5	161.3	162.0	23.8	25.2	32.0	41.0	41.8	40.8
22.5	24.4	32.5	38.7	41.0	40.2	36.2	37.7	45.2	58.0	57.5	58.4	20.5	22.6	30.0	38.6	39.2	38.0
20.6	22.5	26.3	33.5	35.1	34.1	25.6	25.7	31.0	41.0	40.5	41.1	17.0	18.4	24.8	31.6	32.6	31.8
16.8	17.5	22.0	29.5	28.8	28.8	18.0	19.2	26.9	33.9	31.9	31.9	15.5	16.6	21.5	28.3	27.2	27.0
10.5	12.5	16.3	22.6	21.2	19.9							11.5	13.2	16.5	22.6	20.2	19.6
20.0	25.0	34.5	38.7	43.8	43.8	24.2	25.2	35.1	47.5	47.1	49.1	22.0	24.8	39.2	45.9	49.6	49.8
35.0	35.0	47.7	54.6	63.5	63.4	25.8	26.8	41.6	51.0	52.8	53.4	24.5	23.6	41.4	51.7	50.0	50.4
31.3	35.0	41.8	47.4	57.3	57.5	33.8	34.5	42.4	51.5	59.5	60.6	28.0	29.0	41.3	50.9	57.7	57.1
23.3	24.4	32.5	39.3	41.5	39.4	23.0	25.2	34.0	38.6	41.8	40.6	15.5	17.3	27.4	33.9	32.6	32.0
17.0	19.3	22.1	32.6	36.5	35.0	25.6	26.0	30.8	43.8	45.0	46.2	21.8	21.8	28.9	40.1	42.9	43.3
		26.3	30.2	34.3	33.2			29.0	32.2	31.2	30.9			25.7	27.8	29.0	29.2
10.3	10.0	13.3	16.0	20.0	20.0	8.9	8.9	13.0	15.0	15.0	15.4	8.0	8.0	11.0	14.0	15.0	16.0
				17.8	17.8					16.2	16.5					15.2	15.6
39.0	38.8	51.5	56.3	68.5	67.7	35.9	36.3	47.1	53.2	62.6	64.4	32.9	34.8	46.3	51.4	60.0	61.4
				43.6	45.1					42.2	42.5					41.0	41.6
				39.7	40.0					35.4	35.5					33.9	34.1
23.0	23.1	34.5	34.8	44.0	43.1	22.4	23.1	31.8	33.4	42.4	42.7	20.0	20.0	31.8	32.6	40.5	41.3
16.5	16.0	28.5	32.4	43.0	42.1	15.7	15.9	27.9	33.2	42.8	42.4	14.5	14.0	26.2	31.4	40.9	40.6
				38.6	39.2					38.5	41.2					36.1	38.8
28.3	32.7	42.2	48.7	48.1	54.2	42.4	40.6	58.0	67.1	76.4	78.2	29.8	28.7	48.7	54.0	59.1	62.1
				11.1	11.1					7.4	7.8					7.3	7.5
5.4	5.6	10.6	11.5	9.6	9.7	5.9	5.9	9.3	9.1	9.5	9.6	5.6	5.0	9.7	10.0	9.8	10.0
3.6	3.6	7.5	7.1	7.8	7.6	3.8	4.0	8.3	6.8	7.9	7.9	3.0	3.3	7.7	6.3	7.1	6.9
2.4	2.9	6.3	5.6	5.9	6.0	3.5	3.6	7.4	7.3	7.0	7.4	2.6	2.6	6.4	6.5	6.1	6.3
				14.8	14.5					13.6	13.5					13.0	12.8
				25.1	25.7					24.7	24.8					24.1	24.2
				21.0	20.4					20.9	21.5					20.0	19.5
8.2	8.2	11.0	14.0	15.2	15.8	9.2	9.2	11.0	13.1	14.3	15.0	9.3	9.3	10.5	12.6	13.7	15.0
		18.9	18.5	14.3	14.1			18.8	17.6	11.5	11.6			19.0	16.4	11.4	11.6
2.3	2.7	4.2	4.7	5.5	6.3	1.9	1.9	3.3	4.1	4.5	5.3	2.0	1.8	3.2	3.7	4.5	5.0
		6.2	5.7	9.5	8.1			5.2	6.8	12.2	7.4			5.1	5.1	10.4	8.4
				5.5	6.2					7.2	5.2					8.4	5.3
				19.2	18.8					18.1	18.0					14.0	13.9
				20.6	20.0					21.8	21.7					18.2	18.2
				21.2	22.0					21.3	21.2					17.6	17.6
				14.7	14.2					18.1	16.8					17.5	16.2
5.7	8.0	10.7	9.0	11.7	11.4	5.6	7.9	9.7	9.2	10.4	10.7	5.5	7.9	9.8	9.1	10.4	10.4
63.0	61.3	72.9	79.6	88.0	88.3	58.6	59.4	63.2	64.0	66.3	66.0	45.0	45.0	51.3	60.8	64.8	66.9
28.8	28.8	33.0	32.4	46.5	47.9	33.0	33.0	34.1	34.0	50.8	52.5	33.0	29.3	29.1	29.6	43.1	44.6
		16.3	16.0	25.8	25.0			16.8	17.3	27.4	30.4			15.9	17.6	28.2	29.6
		15.2	15.3	17.9	17.9			14.6	15.0	16.3	17.2			13.1	14.0	15.5	16.6
				40.5	40.6					46.7	47.8					42.7	43.0
				57.2	52.9					60.5	61.2					56.6	58.8

* Baked weight.
 † 8-ounce package.

‡ 28-ounce package.
 § No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON

Article.	Unit.	Chicago, Ill.						Cleveland, Ohio.					
		August 15—				July	Aug.	August 15—				July	Aug.
						15,	15,					15,	15,
		1913	1914	1917	1918	1919.	1919.	1913	1914	1917	1918	1919.	1919.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	24.1	27.7	30.8	37.7	39.3	41.1	25.4	27.3	30.8	38.8	42.1	40.2
Round steak.....	Lb.	21.2	24.4	27.3	34.9	35.5	36.1	22.9	23.9	29.1	36.5	38.9	36.7
Rib roast.....	Lb.	20.2	22.7	25.1	31.4	31.9	32.5	18.7	19.7	23.5	29.9	30.8	30.3
Chuck roast.....	Lb.	15.7	18.2	21.3	27.8	26.9	27.2	16.9	17.2	21.5	27.8	27.0	25.9
Plate beef.....	Lb.	11.4	13.2	16.7	21.0	19.6	19.5	12.0	12.2	15.1	20.5	19.2	17.9
Pork chops.....	Lb.	20.9	23.9	32.2	38.8	41.7	44.7	22.1	25.6	39.2	44.8	48.1	47.5
Bacon.....	Lb.	32.0	33.3	42.9	56.4	61.5	61.7	30.3	30.6	44.1	52.1	57.9	54.6
Ham.....	Lb.	32.2	34.6	40.7	50.5	58.8	59.8	37.3	36.5	44.1	51.0	62.6	60.1
Lamb.....	Lb.	19.9	22.2	28.8	35.4	36.2	35.8	19.6	21.6	28.5	36.3	38.3	37.2
Hens.....	Lb.	19.7	20.8	26.5	35.7	38.4	38.3	21.5	22.6	30.2	40.4	44.1	42.6
Salmon (canned).....	Lb.	.....	.....	27.0	30.6	33.9	33.7	.....	.....	24.9	29.3	31.0	31.3
Milk, fresh.....	Qt.	8.0	8.0	10.0	12.4	14.0	15.0	8.0	8.0	12.0	13.0	15.0	15.0
Milk, evaporated (unsweetened).....	(¹)	.....	.....	.....	.....	15.0	15.2	.....	.....	.....	.....	16.3	16.7
Butter.....	Lb.	32.7	33.2	44.8	49.0	57.1	58.4	35.7	37.7	47.8	53.8	62.9	63.2
Oleomargarine.....	Lb.	.....	.....	.....	.....	40.7	41.3	.....	.....	.....	.....	43.5	44.3
Nut margarine.....	Lb.	.....	.....	.....	.....	34.4	33.8	.....	.....	.....	.....	35.8	35.7
Cheese.....	Lb.	25.0	25.0	34.2	35.7	44.1	44.6	23.0	24.5	31.3	33.6	44.7	43.6
Lard.....	Lb.	15.1	15.1	26.5	32.1	40.3	39.9	16.6	16.0	28.1	32.9	44.1	41.4
Crisco.....	Lb.	.....	.....	.....	.....	37.1	38.3	.....	.....	.....	.....	40.4	39.9
Eggs, strictly fresh.....	Doz.	27.3	28.0	42.8	47.8	53.2	54.9	33.3	33.3	49.5	53.9	61.3	62.4
Rolled oats.....	Lb.	.....	.....	.....	.....	6.7	6.7	.....	.....	.....	.....	9.3	8.7
Bread.....	Lb. ²	6.1	6.1	10.5	10.2	10.0	10.0	5.6	5.6	10.1	10.0	9.7	10.1
Flour.....	Lb.	2.9	3.3	7.2	6.5	7.2	7.2	3.2	3.6	7.6	7.0	7.8	7.6
Corn meal.....	Lb.	2.8	2.8	5.9	6.8	6.1	6.1	2.8	2.8	6.3	6.6	6.1	6.1
Corn flakes.....	(³)	.....	.....	.....	.....	12.7	12.8	.....	.....	.....	.....	14.4	14.3
Cream of Wheat.....	(⁴)	.....	.....	.....	.....	24.0	23.9	.....	.....	.....	.....	24.6	24.5
Macaroni.....	Lb.	.....	.....	.....	.....	18.7	18.2	.....	.....	.....	.....	19.1	18.6
Rice.....	Lb.	9.0	8.7	10.5	12.7	14.2	14.8	8.5	9.0	10.3	13.2	14.2	15.8
Beans, navy.....	Lb.	.....	.....	19.2	16.9	11.2	11.9	.....	.....	19.9	15.3	12.0	12.4
Potatoes.....	Lb.	2.0	1.8	3.4	3.5	5.0	5.2	2.1	2.0	3.3	4.1	5.2	5.5
Onions.....	Lb.	.....	.....	3.7	4.5	8.6	6.9	.....	.....	4.7	5.7	10.1	6.6
Cabbage.....	Lb.	.....	.....	.....	.....	6.3	5.2	.....	.....	.....	.....	7.2	6.1
Beans, baked.....	(⁵)	.....	.....	.....	.....	16.8	16.8	.....	.....	.....	.....	16.7	16.3
Corn, canned.....	(⁶)	.....	.....	.....	.....	18.6	17.8	.....	.....	.....	.....	19.7	19.6
Peas, canned.....	(⁶)	.....	.....	.....	.....	17.9	17.9	.....	.....	.....	.....	19.4	19.2
Tomatoes, canned.....	(⁵)	.....	.....	.....	.....	15.9	15.4	.....	.....	.....	.....	17.7	16.7
Sugar, granulated.....	Lb.	5.2	7.2	9.4	8.9	10.9	11.9	5.6	8.2	10.0	9.3	10.9	11.0
Tea.....	Lb.	55.0	55.0	57.1	57.5	63.9	63.0	50.0	50.0	51.2	63.2	72.0	70.6
Coffee.....	Lb.	30.7	30.0	29.2	27.9	42.3	43.1	26.5	26.5	28.0	29.4	47.5	48.4
Prunes.....	Lb.	.....	.....	16.5	17.2	27.6	28.5	.....	.....	15.3	17.3	27.3	26.8
Raisins.....	Lb.	.....	.....	14.6	15.0	18.0	18.3	.....	.....	14.0	14.9	17.8	19.3
Bananas.....	Doz.	.....	.....	.....	.....	37.5	36.8	.....	.....	.....	.....	47.3	46.8
Oranges.....	Doz.	.....	.....	.....	.....	49.9	49.7	.....	.....	.....	.....	54.7	54.1

¹ 15-16 ounce can.² Baked weight.³ 8-ounce package.

AUG. 15, 1913, 1914, 1917, 1918, 1919, AND JULY 15, 1919, FOR 19 CITIES—Continued.

Denver, Colo.						Detroit, Mich.						Los Angeles, Calif.					
August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
24.3	25.0	31.5	39.0	41.1	38.0	26.3	25.9	31.6	39.0	43.0	42.0	24.0	23.7	26.8	32.9	33.3	32.0
22.2	23.5	29.6	36.3	38.2	35.1	21.0	22.6	28.6	36.0	38.2	37.5	21.0	21.5	23.9	31.1	29.9	28.6
17.8	18.9	23.9	29.1	32.7	29.8	20.5	20.0	25.8	30.8	32.8	32.1	19.6	19.8	22.4	29.2	28.1	27.3
15.8	17.4	21.1	25.3	27.4	23.5	15.0	16.6	20.2	26.8	26.5	25.5	15.8	15.9	17.7	23.4	21.7	20.3
9.6	10.7	14.7	18.0	18.1	16.0	11.3	12.4	15.2	21.1	19.8	18.4	12.3	13.1	14.3	19.4	17.2	16.0
20.0	25.3	34.7	41.4	42.8	44.9	21.5	23.4	35.5	41.5	47.3	48.4	25.4	27.0	34.4	42.5	46.6	50.6
30.5	30.5	45.5	56.9	61.0	60.0	25.0	26.0	42.7	52.2	57.1	57.7	33.8	35.2	47.5	61.3	65.5	66.0
33.8	32.5	43.8	52.5	61.7	62.1	28.0	30.0	41.7	52.2	60.2	61.9	36.7	37.4	45.8	57.2	63.6	64.0
16.1	17.9	30.8	35.7	34.8	33.9	17.3	18.9	30.0	36.0	39.6	37.9	18.8	19.3	27.4	32.9	32.0	30.7
19.4	21.6	26.7	36.0	38.9	38.7	21.8	22.1	28.8	39.4	43.3	43.7	26.8	27.2	27.1	36.4	44.7	45.4
.....	.....	26.4	28.8	32.7	32.5	.....	.....	25.8	31.3	32.3	31.5	.....	.....	30.3	37.2	36.2	38.3
8.4	8.4	10.3	11.2	12.7	12.8	7.9	8.0	12.0	14.0	15.0	16.0	10.0	10.0	11.0	14.0	14.0	14.0
.....	.....	.....	.....	15.6	16.1	.....	.....	.....	.....	15.6	15.7	.....	.....	.....	.....	14.3	14.6
34.3	34.3	44.8	50.0	58.4	61.2	33.7	34.8	45.5	51.4	61.0	62.6	39.5	34.3	48.7	58.0	65.0	64.7
.....	.....	.....	.....	40.6	40.2	.....	.....	.....	.....	42.2	43.4	.....	.....	.....	.....	44.7	44.9
.....	.....	.....	.....	35.0	35.3	.....	.....	.....	.....	34.4	34.5	.....	.....	.....	.....	36.4	36.4
26.1	26.1	34.7	35.8	44.0	44.7	20.7	21.7	30.8	33.8	42.3	43.6	19.5	20.0	33.0	35.3	44.5	44.5
16.5	15.8	28.9	32.5	41.9	41.5	16.6	15.7	27.5	33.2	43.0	42.4	17.9	17.3	27.3	33.6	39.9	39.7
.....	.....	.....	.....	37.6	39.2	.....	.....	.....	.....	38.6	40.4	.....	.....	.....	.....	40.8	41.0
30.0	30.7	45.0	49.8	51.6	57.3	30.0	29.2	46.3	53.3	59.0	61.5	39.0	40.0	46.9	56.9	58.7	60.9
.....	.....	.....	.....	8.6	8.6	.....	.....	.....	.....	7.7	8.1	.....	.....	.....	.....	9.3	8.8
5.4	5.4	10.1	12.0	11.2	11.7	5.6	5.5	9.0	9.5	10.4	10.4	6.0	6.2	8.9	9.3	9.4	9.4
2.5	2.6	6.5	6.0	6.4	6.1	3.1	3.3	7.6	6.9	7.4	7.3	3.6	3.6	7.0	7.1	7.4	7.4
2.5	2.5	6.2	6.0	6.0	6.1	2.8	3.2	6.7	7.2	6.5	6.7	3.3	3.5	7.0	7.7	7.3	7.4
.....	.....	.....	.....	14.8	14.6	.....	.....	.....	.....	13.8	13.8	.....	.....	.....	.....	13.5	13.4
.....	.....	.....	.....	25.2	25.2	.....	.....	.....	.....	24.8	24.9	.....	.....	.....	.....	24.6	24.3
.....	.....	.....	.....	19.3	19.4	.....	.....	.....	.....	19.7	19.8	.....	.....	.....	.....	16.2	15.7
8.6	8.6	11.2	14.2	14.7	14.9	8.4	8.4	10.7	13.3	14.5	15.6	7.7	8.0	10.2	13.6	14.6	14.7
.....	.....	20.2	15.9	12.9	12.8	.....	.....	19.0	15.1	11.5	11.6	.....	.....	17.4	16.7	10.4	10.8
1.8	2.0	4.1	3.8	5.1	4.8	1.9	1.7	3.5	3.8	5.1	5.5	1.8	1.7	3.8	3.3	4.2	3.9
.....	.....	4.4	4.9	9.6	7.1	.....	.....	4.8	5.4	10.3	8.3	.....	.....	2.9	4.2	7.8	5.2
.....	.....	.....	.....	5.0	3.2	.....	.....	.....	.....	8.3	4.9	.....	.....	.....	.....	3.6	3.4
.....	.....	.....	.....	18.1	17.9	.....	.....	.....	.....	16.4	16.2	.....	.....	.....	.....	18.5	17.7
.....	.....	.....	.....	18.1	18.2	.....	.....	.....	.....	20.5	20.1	.....	.....	.....	.....	18.5	18.9
.....	.....	.....	.....	19.8	19.7	.....	.....	.....	.....	18.7	19.2	.....	.....	.....	.....	18.8	19.4
.....	.....	.....	.....	15.8	15.9	.....	.....	.....	.....	17.4	17.4	.....	.....	.....	.....	15.3	15.1
5.8	7.7	9.7	9.6	10.9	11.1	5.4	8.1	10.0	9.5	10.9	11.3	5.6	8.1	9.2	8.9	10.3	10.2
52.8	52.8	56.9	61.0	70.2	70.8	43.3	43.3	50.8	57.7	61.7	63.1	54.5	54.5	56.5	64.5	67.4	67.9
29.4	29.4	30.7	30.4	45.4	48.4	29.3	30.0	29.4	30.4	45.1	47.7	36.3	36.3	30.6	30.4	45.5	44.9
.....	.....	17.8	17.6	25.1	24.9	.....	.....	16.4	18.2	27.2	29.3	.....	.....	16.3	17.7	26.8	29.5
.....	.....	14.7	14.7	17.5	18.4	.....	.....	13.8	15.2	17.1	17.9	.....	.....	14.1	14.0	16.0	16.9
.....	.....	.....	.....	45.9	42.5	.....	.....	.....	.....	32.8	31.8	.....	.....	.....	.....	41.0	41.0
.....	.....	.....	.....	52.6	50.2	.....	.....	.....	.....	51.4	53.8	.....	.....	.....	.....	38.8	38.3

* 28-ounce package.

* No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON

Article.	Unit.	Milwaukee, Wis.						New Orleans, La.					
		August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb..	22.6	24.8	30.5	37.3	41.0	40.1	21.9	23.8	27.7	33.2	34.5	33.9
Round steak.....	Lb..	21.2	22.8	28.5	35.8	38.4	37.8	18.9	19.9	23.9	30.0	31.2	31.1
Rib roast.....	Lb..	18.8	19.4	24.2	29.1	32.1	31.3	19.4	19.6	23.0	29.1	30.0	29.9
Chuck roast.....	Lb..	16.4	17.0	22.1	26.9	28.6	28.4	14.5	15.4	18.3	21.8	23.7	22.6
Plate beef.....	Lb..	12.0	12.6	15.6	20.4	20.0	20.0	11.0	12.8	15.2	18.7	18.6	18.9
Pork chops.....	Lb..	20.2	23.0	34.2	38.7	44.1	44.7	23.8	27.0	33.6	41.6	48.4	48.9
Bacon.....	Lb..	28.6	28.6	42.0	52.7	57.9	58.1	33.1	32.4	45.8	55.5	61.4	60.0
Ham.....	Lb..	29.0	29.2	39.8	48.2	55.8	55.9	31.3	30.0	39.1	45.7	55.3	57.1
Lamb.....	Lb..	20.5	21.0	30.5	36.9	39.1	38.2	21.3	22.2	27.9	36.1	38.5	39.1
Hens.....	Lb..	19.8	21.4	25.9	35.9	38.4	39.3	21.7	21.3	28.3	36.4	41.6	40.7
Salmon (canned).....	Lb..			27.1	28.9	33.4	34.6			30.0	32.4	37.3	36.9
Milk, fresh.....	Qt..	7.0	7.0	9.0	11.0	12.0	13.0	9.3	9.7	11.6	14.2	16.5	16.5
Milk, evaporated (unsweetened).....	(²)					16.6	16.7					15.9	16.1
Butter.....	Lb..	32.2	33.7	45.4	50.1	59.3	61.7	34.0	35.6	46.7	52.6	63.1	64.0
Oleomargarine.....	Lb..					42.3	42.9					43.1	43.5
Nut margarine.....	Lb..					34.0	34.7					36.3	36.7
Cheese.....	Lb..	21.3	21.3	32.1	34.1	41.5	43.5	22.0	22.3	31.2	34.3	43.1	44.1
Lard.....	Lb..	16.3	16.0	27.7	33.1	43.0	42.2	15.4	14.7	27.1	32.9	42.9	42.7
Crisco.....	Lb..					35.3	38.1					35.9	39.2
Eggs, strictly fresh.....	Doz.	26.2	27.0	42.5	47.4	49.0	51.9	30.4	29.8	41.3	48.4	51.3	55.6
Rolled oats.....	Lb..					7.8	8.5					8.7	8.9
Bread.....	Lb. ³	5.6	6.0	11.4	9.2	10.0	10.0	5.1	4.8	8.7	9.5	9.2	9.1
Flour.....	Lb..	3.1	3.5	7.8	6.7	7.6	7.5	3.7	3.8	8.0	7.3	7.7	7.5
Corn meal.....	Lb..	3.3	3.6	7.4	6.1	5.9	6.1	2.8	2.8	7.2	6.6	5.8	6.0
Corn flakes.....	(⁴)					14.3	14.2					14.4	14.1
Cream of Wheat.....	(⁵)					25.1	25.2					24.8	25.0
Macaroni.....	Lb..					19.9	19.3					11.3	11.1
Rice.....	Lb..	9.0	9.5	11.5	14.1	15.2	15.3	7.4	7.5	10.2	12.3	14.2	15.1
Beans, navy.....	Lb..			20.3	14.9	11.3	11.7			17.2	16.0	10.8	11.0
Potatoes.....	Lb..	1.5	1.9	3.8	3.5	5.4	5.5	2.2	2.5	5.1	3.9	4.3	4.8
Onions.....	Lb..			4.5	5.2	10.4	7.3			5.0	5.4	9.0	7.6
Cabbage.....	Lb..					6.6	3.8					6.7	4.8
Beans, baked.....	(⁶)					16.5	16.4					17.3	17.5
Corn, canned.....	(⁶)					17.9	18.0					17.6	17.4
Peas, canned.....	(⁶)					17.9	17.4					18.0	18.2
Tomatoes, canned.....	(⁶)					17.6	17.5					14.7	14.7
Sugar, granulated.....	Lb..	5.5	7.4	9.9	9.3	10.6	11.1	5.3	8.0	9.9	9.0	10.7	10.8
Tea.....	Lb..	50.0	50.0	59.4	63.6	67.4	67.5	62.1	62.1	60.5	61.8	69.4	68.4
Coffee.....	Lb..	27.5	27.5	28.1	26.8	44.0	45.9	26.4	25.7	26.6	25.1	43.0	43.8
Prunes.....	Lb..			15.8	15.6	24.5	26.6			16.9	17.1	29.4	31.5
Raisins.....	Lb..			14.8	14.8	18.0	18.5			15.4	15.7	18.2	19.0
Bananas.....	Doz.					38.3	36.3					20.0	21.3
Oranges.....	Doz.					52.1	54.7					59.0	61.0

¹The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

² 15-16 ounce can.

AUG. 15, 1913, 1914, 1917, 1918, 1919, AND JULY 15, 1919, FOR 19 CITIES—Continued.

New York, N. Y.						Philadelphia, Pa.						Pittsburgh, Pa.					
August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
23.8	29.2	35.1	44.8	44.4	44.0	32.3	33.1	38.7	51.3	52.0	52.6	28.0	29.8	36.4	46.7	48.9	44.8
26.1	28.4	35.1	46.7	46.2	45.6	27.5	29.1	36.4	48.2	48.1	48.4	24.8	26.5	33.1	43.7	45.1	40.9
21.9	23.5	28.6	37.6	38.6	38.3	22.5	23.7	28.6	39.2	40.4	39.6	22.5	23.5	27.7	35.7	36.9	34.7
16.3	18.2	22.6	31.1	29.3	28.9	18.4	19.5	24.8	33.5	31.0	32.1	17.3	18.7	23.5	31.5	30.7	28.9
14.9	16.0	20.6	28.6	27.1	26.0	12.3	12.8	16.8	23.0	19.0	20.6	12.3	13.8	16.8	22.9	20.4	19.0
22.2	25.9	34.8	42.3	47.5	47.8	22.4	26.2	36.1	45.6	50.6	51.1	23.5	27.0	36.0	44.4	49.0	49.0
26.4	26.1	42.3	51.9	54.4	53.6	28.2	28.4	41.7	54.2	57.9	56.5	30.1	31.5	44.3	55.7	60.5	59.7
30.0	32.0	44.6	36.1	61.6	61.3	32.6	33.2	45.3	54.5	60.8	63.0	31.6	32.9	43.7	54.4	63.5	63.0
15.8	18.6	26.4	33.1	32.1	31.4	20.2	21.5	31.3	39.2	42.3	41.9	19.7	22.7	32.9	38.6	41.8	39.2
22.0	22.5	28.8	40.7	41.5	41.8	23.1	24.0	30.6	43.3	45.4	46.0	26.0	26.5	34.6	44.1	46.6	48.8
9.0	9.0	12.5	14.0	16.0	16.0	8.0	8.0	11.0	12.0	13.0	14.0	8.6	9.0	12.3	13.0	14.3	15.3
34.3	35.5	47.0	52.1	14.8	15.4	61.3	63.0	39.4	40.7	53.1	58.6	67.4	68.8	35.6	36.8	47.5	54.0
				42.2	42.8					43.9	44.8					41.8	41.9
19.4	19.6	33.1	33.5	34.2	34.2	25.0	27.0	34.8	36.7	37.8	37.4	24.5	25.0	32.6	35.8	35.0	35.6
16.2	15.6	27.5	32.5	42.5	41.6	15.6	15.1	28.3	33.0	44.8	46.1	15.8	15.7	28.1	32.7	42.7	43.3
38.6	38.9	54.4	60.9	37.6	39.1					40.4	41.0					41.7	41.9
				66.4	68.5	34.3	33.0	47.6	55.0	36.2	39.0					39.5	41.4
										59.6	62.9	28.9	29.1	43.5	53.1	56.8	57.7
6.1	6.4	9.9	9.9	7.6	7.8					7.9	7.8					8.4	8.8
3.3	3.6	7.9	7.4	10.0	10.0	4.8	4.7	8.9	9.5	9.4	9.4	5.4	5.4	10.4	9.8	10.3	10.3
3.4	3.4	6.7	7.8	7.8	7.8	3.2	3.6	7.6	7.0	7.2	7.4	3.2	3.6	7.8	6.7	7.6	7.6
				12.1	12.1	2.7	2.8	5.7	7.0	5.6	5.7	2.8	3.0	7.0	7.1	6.9	7.0
										12.4	12.3					13.6	13.6
				24.1	24.2					24.4	24.3					25.1	25.1
				19.7	20.0					20.1	20.2					17.0	18.1
8.0	8.3	10.4	13.4	14.7	16.1	9.8	10.0	11.0	14.4	15.1	16.6	9.2	9.2	10.6	14.0	14.9	15.5
		18.8	17.4	12.2	12.5			18.3	17.1	12.1	12.2			18.9	17.0	11.9	12.3
2.4	2.2	3.2	3.8	5.1	4.9	2.1	2.0	3.5	4.1	5.0	5.2	1.9	1.9	3.2	3.9	5.0	5.2
		4.7	6.3	10.8	8.6			4.9	6.6	9.2	8.9			5.1	5.9	10.9	9.1
				4.9	4.0					6.0	5.2					7.5	5.2
				15.2	15.5					14.4	14.3					16.7	16.3
				19.8	19.4					18.7	18.6					18.6	19.1
				18.5	18.2					18.2	18.2					19.0	19.0
				14.9	15.3					14.7	14.3					15.7	15.2
5.0	7.1	9.0	8.8	10.0	10.6	5.0	7.1	9.0	8.9	10.0	10.3	5.7	7.9	10.2	9.4	10.9	11.3
43.3	43.3	50.1	54.2	57.0	55.6	54.0	54.0	57.6	59.8	60.4	61.0	58.0	60.0	68.5	75.2	84.0	82.7
27.2	26.3	26.3	28.0	42.6	45.4	24.5	24.5	27.0	27.3	42.0	43.1	30.0	29.3	30.2	29.6	46.2	47.6
		16.5	18.5	30.8	31.9			15.3	17.7	30.5	30.7			15.9	17.9	27.5	27.2
		14.6	15.0	16.7	17.3			13.8	14.4	16.1	16.7			14.6	14.7	17.5	18.7
				36.3	35.5					36.9	37.0					42.8	42.5
				53.8	58.1					51.6	52.7					53.8	52.7

* Baked weight.
 * 8-ounce package.

* 28-ounce package.
 * No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON

Article.	Unit.	St. Louis, Mo.						San Francisco, Calif.					
		August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	25.6	28.3	31.1	38.0	40.1	37.0	20.7	20.7	23.1	31.6	29.8	29.4
Round steak.....	Lb.	24.7	26.0	30.5	37.6	39.8	37.0	19.3	19.7	22.6	31.0	28.5	28.2
Rib roast.....	Lb.	19.0	20.0	25.5	30.7	32.2	30.3	21.0	21.7	22.7	30.0	28.8	28.3
Chuck roast.....	Lb.	15.3	16.8	21.0	25.7	25.2	22.6	15.0	15.5	15.7	22.8	20.7	19.8
Plate beef.....	Lb.	11.5	14.2	16.0	20.6	20.5	18.8	13.3	15.0	15.3	21.0	18.5	17.5
Pork chops.....	Lb.	20.8	26.3	35.5	40.6	43.7	44.6	23.7	25.0	32.8	43.0	46.1	49.2
Bacon.....	Lb.	28.0	28.0	42.0	50.3	56.2	54.8	34.7	35.6	44.6	58.3	64.4	64.2
Ham.....	Lb.	28.3	30.0	41.6	50.2	59.5	58.7	32.0	33.0	43.0	50.3	60.3	59.7
Lamb.....	Lb.	19.0	19.3	28.0	34.6	37.6	34.5	16.5	18.4	26.6	33.8	33.7	32.1
Hens.....	Lb.	17.4	18.7	24.6	34.1	38.1	36.9	23.8	24.3	26.2	40.5	47.1	46.4
Salmon (canned).....	Lb.			27.1	29.8	31.9	31.5			24.5	27.3	28.9	28.4
Milk, fresh.....	Qt.	8.0	8.0	11.0	14.0	14.0	15.0	10.0	10.0	10.0	12.1	14.0	14.0
Milk, evaporated (unsweetened) (1).....	Lb.					15.6	15.9					14.4	15.0
Butter.....	Lb.	33.8	35.5	47.5	53.8	61.8	63.2	40.7	34.6	50.4	58.6	64.7	63.9
Oleomargarine.....	Lb.					38.7	39.6					37.1	36.7
Nut margarine.....	Lb.					34.5	34.9					34.8	36.2
Cheese.....	Lb.	19.2	20.5	32.4	35.8	41.7	42.5	19.0	18.5	30.6	33.8	41.2	44.2
Lard.....	Lb.	14.5	13.9	26.3	30.4	39.5	38.6	18.0	17.0	28.4	34.1	39.5	41.2
Crisco.....	Lb.					38.7	39.1					40.0	42.3
Eggs, strictly fresh.....	Doz.	23.0	25.6	37.7	46.6	49.5	51.3	38.2	40.0	47.5	57.3	56.6	62.4
Rolled oats.....	Lb.					6.5	6.5					8.0	8.5
Bread.....	Lb. ²	5.5	5.6	10.8	10.0	10.0	10.0	5.9	5.9	9.3	10.0	10.0	10.0
Flour.....	Lb.	3.0	3.3	7.1	6.5	7.0	6.9	3.4	3.5	6.9	7.1	7.6	7.3
Corn meal.....	Lb.	2.2	2.6	6.2	6.1	5.7	6.0	3.4	3.5	6.9	7.2	7.1	6.9
Corn flakes.....	(³)					13.8	13.6					14.2	14.1
Cream of Wheat.....	(⁴)					24.1	24.2					24.9	24.8
Macaroni.....	Lb.					17.5	18.1						16.3
Rice.....	Lb.	8.4	8.7	9.9	13.4	14.0	15.1	8.5	8.5	9.9	13.7	14.4	14.9
Beans, navy.....	Lb.			19.4	16.9	11.7	11.6			18.5	15.3	9.9	10.4
Potatoes.....	Lb.	1.9	2.0	3.3	3.4	4.2	4.3	1.7	1.8	3.5	3.3	4.0	3.4
Onions.....	Lb.			4.3	5.1	8.0	6.5			2.4	3.2	5.9	4.5
Cabbage.....	Lb.					3.8	5.3						
Beans, baked.....	(⁵)					15.5	15.4					19.2	19.1
Corn, canned.....	(⁶)					16.9	16.6					19.7	19.6
Peas, canned.....	(⁶)					16.5	16.4					17.8	17.8
Tomatoes, canned.....	(⁶)					14.8	14.1					14.5	13.9
Sugar, granulated.....	Lb.	5.4	7.9	10.0	9.4	11.0	11.9	5.5	7.9	9.1	8.9	10.2	10.1
Tea.....	Lb.	55.0	55.8	61.0	68.7	72.7	73.2	50.0	50.0	52.1	54.4	58.3	57.4
Coffee.....	Lb.	24.4	24.7	28.0	27.7	44.6	46.3	32.0	32.0	30.4	31.4	44.6	44.8
Prunes.....	Lb.			16.8	17.6	27.5	27.5			14.4	15.1	24.2	24.0
Raisins.....	Lb.			17.0	16.4	16.9	18.7			14.2	13.8	16.4	16.6
Bananas.....	Doz.					34.2	32.7					42.1	38.8
Oranges.....	Doz.					46.4	45.2					53.8	54.4

¹ 15-16 ounce can.² Baked weight.³ 8-ounce package.

AUG. 15, 1913, 1914, 1917, 1918, 1919, AND JULY 15, 1919, FOR 19 CITIES—Concluded.

Seattle, Wash.						Washington, D. C.					
August 15—				July 15, 1919.	Aug. 15, 1919.	August 15—				July 15, 1919.	Aug. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
24.4	23.3	26.1	36.2	38.4	37.4	27.8	31.3	35.4	49.4	51.0	51.3
21.5	20.5	24.8	34.3	36.5	35.4	24.5	28.4	34.1	47.0	47.8	48.3
20.0	18.8	21.9	31.3	31.7	29.4	21.6	24.4	27.9	39.6	39.7	38.2
16.2	14.5	17.8	25.4	24.5	23.6	17.3	19.8	24.0	35.1	33.3	31.3
12.7	12.0	15.0	20.7	19.7	18.8	12.1	14.6	18.1	25.2	21.5	19.3
24.2	24.5	33.9	44.5	50.3	51.2	23.0	26.9	37.1	48.0	53.6	53.8
34.2	33.3	46.0	58.1	65.4	64.6	28.4	28.9	41.3	52.6	55.7	57.9
31.7	31.7	40.6	51.9	60.7	61.2	31.0	32.0	41.0	52.1	61.0	61.1
19.4	17.6	27.0	35.7	37.9	34.0	19.4	24.0	33.7	44.3	44.8	43.3
23.8	22.8	25.8	39.4	43.6	41.9	21.9	21.9	31.1	44.5	47.9	46.8
8.5	8.6	27.0	29.9	31.5	32.4	8.0	8.0	23.0	30.1	32.1	32.1
39.0	37.8	12.0	14.0	13.3	15.0	36.6	38.3	11.0	14.0	14.3	15.0
				14.6	15.1					15.8	16.1
				62.9	66.2					67.0	67.6
				40.3	40.4					41.7	40.6
21.7	22.9	30.3	33.3	37.0	36.8	23.8	23.5	34.1	35.1	36.5	36.7
17.4	16.0	26.9	33.6	44.0	43.6	15.3	14.4	27.6	34.0	43.7	43.8
39.0	39.2	51.1	59.9	41.0	42.1					41.6	42.6
				41.4	43.3					39.8	40.5
				61.6	67.2	30.0	31.4	44.3	53.7	56.8	60.1
5.5	6.0	10.4	10.7	8.1	8.4	5.7	5.6	10.2	10.3	9.5	9.5
2.9	3.0	6.7	6.5	10.9	11.7	3.8	4.1	7.7	6.9	10.0	10.0
3.2	3.3	7.3	7.4	6.7	6.5	2.5	2.6	6.2	6.0	7.9	7.9
				7.2	7.3					5.6	5.8
				14.9	14.9					13.8	13.8
7.7	8.2	10.3	14.1	27.2	27.2	9.8	9.4	10.9	12.6	24.6	24.6
1.6	1.7	19.7	17.1	16.9	16.5					20.9	20.7
		2.7	4.3	15.0	16.3	2.0	1.9	2.9	4.2	15.3	16.0
		2.9	4.1	10.4	11.3					13.3	13.2
				3.5	3.7					4.5	5.0
				7.4	6.6			5.2	5.8	10.7	8.7
				6.7	5.8					6.5	6.2
				21.4	21.9					15.2	14.9
				20.2	20.4					20.7	19.9
				20.2	20.8					20.5	19.4
6.3	8.2	9.8	9.5	16.9	17.4	5.2	7.9	9.2	8.9	17.0	16.4
50.0	50.0	52.3	57.9	10.8	10.7	57.5	57.5	58.8	71.3	10.7	10.9
28.0	30.0	31.4	31.6	64.0	62.8	28.8	28.8	28.1	29.2	78.9	78.1
				45.1	46.2					46.1	48.1
		14.2	15.7	25.9	26.8			16.2	17.5	26.1	26.4
		14.7	14.4	18.5	19.1			14.4	16.2	16.2	16.7
				50.0	48.8					44.3	43.3
				54.6	54.1					53.8	54.4

* 28-ounce package.

* No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.		Columbus, Ohio.	
		July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.
Sirloin steak.....	Lb...	51.9	51.6	38.6	34.2	39.3	38.8	36.9	34.7	41.3	39.3
Round steak.....	Lb...	48.9	49.1	35.3	30.3	38.9	37.9	36.8	34.6	39.3	37.9
Rib roast.....	Lb...	38.4	37.5	31.1	26.2	32.3	32.5	30.9	28.3	33.2	32.2
Chuck roast.....	Lb...	31.7	31.5	23.7	19.0	26.9	26.4	24.1	22.1	29.1	27.6
Plate beef.....	Lb...	19.7	19.3	17.2	12.4	21.1	20.2	19.4	19.7	23.0	20.8
Pork chops.....	Lb...	46.4	45.4	47.5	48.0	46.7	45.6	44.3	43.3	43.0	43.7
Bacon.....	Lb...	59.2	59.9	65.6	64.7	62.6	62.2	53.8	51.5	57.2	56.1
Ham.....	Lb...	64.5	64.6	63.2	61.9	57.1	56.8	59.6	58.5	60.0	58.8
Lamb.....	Lb...	39.7	38.7	33.7	29.0	40.4	40.0	34.9	30.8	35.0	30.0
Hens.....	Lb...	43.8	44.5	39.8	36.7	48.6	48.3	43.6	41.0	38.3	37.5
Salmon (canned).....	Lb...	34.8	34.3	42.8	42.5	30.9	30.2	29.3	29.3	30.4	30.0
Milk, fresh.....	Qt...	16.0	16.0	15.6	15.6	20.7	20.5	14.0	14.0	14.0	14.0
Milk, evaporated (unsweetened).....	(¹)	16.0	16.2	15.8	17.4	15.9	16.3	14.8	15.4	15.0	15.2
Butter.....	Lb...	61.2	62.4	61.8	66.7	64.7	63.8	60.4	61.8	60.2	61.6
Oleomargarine.....	Lb...	40.9	41.1	42.5	.....	44.1	44.8	42.0	42.3	41.5	42.6
Nut margarine.....	Lb...	34.8	35.0	.....	.....	44.7	45.7	34.8	35.0	35.2	35.0
Cheese.....	Lb...	42.7	42.7	43.3	44.8	42.3	42.8	43.3	45.1	42.7	43.0
Lard.....	Lb...	42.6	41.4	43.9	43.9	42.6	42.9	39.7	38.8	39.7	39.8
Crisco.....	Lb...	39.8	40.7	42.0	44.9	38.4	39.7	37.2	37.8	37.3	40.7
Eggs, strictly fresh.....	Doz...	71.3	76.3	60.0	67.9	54.0	55.4	49.9	49.6	50.4	48.3
Rolled oats.....	Lb...	9.4	9.3	8.5	9.2	9.5	9.7	7.2	8.3	8.2	8.5
Bread.....	Lb. ²	10.4	10.7	10.0	12.2	10.0	10.0	9.7	9.9	10.2	10.2
Flour.....	Lb...	7.5	7.5	7.6	7.9	7.8	7.7	7.5	7.5	7.3	7.0
Corn meal.....	Lb...	8.1	8.0	7.7	7.6	5.5	6.2	5.3	5.8	6.0	6.4
Corn flakes.....	(⁴)	13.8	13.7	14.4	14.6	14.9	14.9	13.7	13.8	14.2	14.2
Cream of Wheat.....	(⁵)	24.3	24.1	30.0	30.0	25.0	25.0	24.8	25.1	25.0	25.0
Macaroni.....	Lb...	22.7	22.4	18.8	19.2	21.4	20.9	15.8	15.4	19.0	18.6
Rice.....	Lb...	15.0	16.1	13.1	14.6	13.5	14.4	14.5	15.1	14.5	16.3
Beans, navy.....	Lb...	12.0	11.9	11.8	12.1	14.1	13.6	10.8	11.0	11.3	11.3
Potatoes.....	Lb...	4.9	4.6	5.0	4.6	4.6	5.7	5.0	4.6	5.4	5.4
Onions.....	Lb...	11.1	9.0	8.5	7.0	12.8	9.4	6.9	5.9	10.3	8.1
Cabbage.....	Lb...	7.1	4.0	6.4	6.6	7.3	7.4	5.6	6.1	9.3	6.4
Beans, baked.....	(⁶)	16.9	16.4	23.1	22.4	15.3	15.3	14.7	14.6	16.6	16.4
Corn, canned.....	(⁶)	21.8	22.1	18.1	18.7	21.8	21.6	16.9	17.1	15.9	15.6
Peas, canned.....	(⁶)	20.8	20.6	17.9	18.6	21.4	22.3	17.3	17.2	16.5	15.4
Tomatoes, canned.....	(⁶)	16.9	16.1	17.8	17.6	15.6	15.7	14.4	14.3	15.1	14.2
Sugar, granulated.....	Lb...	10.7	10.9	12.1	12.1	10.9	11.0	10.8	11.6	10.8	10.9
Tea.....	Lb...	65.2	63.1	76.2	75.3	76.0	76.4	75.4	77.1	82.3	82.2
Coffee.....	Lb...	44.4	45.3	53.5	56.9	43.3	46.6	41.8	43.1	46.4	47.7
Prunes.....	Lb...	28.3	29.2	25.4	27.5	25.5	26.1	22.9	24.0	21.5	23.2
Raisins.....	Lb...	17.9	19.4	17.0	18.6	16.5	17.9	17.8	20.1	18.2	18.6
Bananas.....	Doz...	39.1	39.0	50.0	51.3	39.3	45.0	36.5	37.5	38.5	38.1
Oranges.....	Doz...	56.9	58.9	54.0	52.4	64.0	65.0	43.7	43.0	51.3	55.0

¹ The steak for which price are here quoted, is known as "sirloin" in most of the cities included in this report, but in this city it is called "rump" steak.

² 15-16 ounce can.

FOOD ON JULY 15 AND AUG. 15, 1919, FOR 31 CITIES.

Dallas, Tex.		Fall River, Mass.		Houston, Tex.		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.	
July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.
40.6	38.1	60.4	60.2	36.3	34.4	39.9	38.4	39.6	40.6	39.0	36.8
39.7	37.3	50.1	50.4	36.3	35.0	39.5	38.4	38.2	38.1	36.0	34.7
34.4	33.3	36.8	36.1	29.1	27.6	28.7	27.6	31.3	30.6	29.5	27.7
31.3	28.5	29.6	29.9	27.6	25.6	26.2	25.7	26.1	26.2	24.1	22.9
26.0	23.3	.....	.....	24.8	20.3	19.3	18.7	20.1	19.6	19.8	18.6
44.0	43.8	46.3	47.2	44.0	43.7	46.1	44.8	43.1	45.0	41.8	42.4
62.8	62.1	54.1	54.1	63.7	64.4	56.7	56.7	58.7	59.6	59.6	58.3
60.7	58.8	56.8	58.1	51.1	53.8	59.9	59.9	55.7	57.9	56.0	56.8
45.0	38.8	36.9	37.5	40.0	40.0	44.0	42.0	35.4	38.3	31.6	30.6
37.8	38.3	46.9	46.5	38.0	36.0	37.8	35.6	39.1	38.8	36.5	36.7
32.7	31.9	30.2	30.4	31.6	30.9	26.3	26.6	32.9	31.5	32.5	31.9
18.0	18.0	15.3	15.3	17.7	18.2	13.0	13.0	18.0	18.0	15.0	15.0
16.9	16.8	16.0	16.1	16.0	16.3	16.3	16.7	16.0	16.9	16.7	16.8
59.8	61.8	61.6	62.4	59.9	61.0	60.9	62.3	65.2	66.2	62.1	63.2
37.0	36.7	39.6	40.3	42.3	42.6	44.4	44.9	42.4	44.0	40.2	40.7
37.3	37.4	36.5	36.5	37.6	36.7	35.4	35.8	38.6	38.2	35.6	35.8
44.1	44.5	42.5	42.7	40.8	40.5	44.4	45.0	43.3	43.2	44.1	45.3
42.1	38.6	42.4	42.1	41.2	39.1	42.3	41.2	39.0	40.3	44.2	43.5
41.2	42.0	38.3	41.7	36.5	37.5	39.3	41.3	39.6	41.0	40.3	43.7
46.8	50.3	73.4	79.4	49.1	52.0	51.3	51.9	53.6	58.4	50.8	52.9
9.9	10.3	9.5	9.5	9.9	9.4	8.4	9.5	10.6	10.9	9.5	10.6
10.0	10.0	10.9	10.9	8.9	8.8	9.7	9.7	10.0	10.0	10.0	10.0
7.2	7.3	7.9	7.9	7.7	7.6	7.4	7.2	7.9	7.7	7.0	6.9
7.2	7.0	8.4	8.2	6.3	6.4	5.9	6.2	5.9	6.2	6.7	7.5
14.6	14.2	14.2	14.5	14.3	14.4	14.4	14.6	14.7	14.7	14.9	15.0
24.8	25.4	25.0	24.8	24.7	24.7	26.4	26.2	25.3	25.4	25.0	25.0
20.2	19.9	21.9	22.2	17.7	18.7	20.3	20.9	20.3	21.0	18.7	18.5
14.5	15.9	14.3	15.1	13.4	14.7	15.4	16.7	14.2	15.1	13.7	15.2
13.1	13.6	11.8	11.9	13.1	12.4	11.9	12.7	13.7	14.1	13.0	12.7
5.5	6.6	4.8	4.6	4.6	5.4	5.6	6.4	6.0	6.7	4.2	4.7
9.5	5.7	12.1	9.4	9.7	6.5	10.1	8.2	12.8	9.9	9.5	8.6
5.4	6.0	5.9	4.4	5.9	6.0	7.1	6.9	7.7	7.6	3.5	5.6
19.7	19.0	16.5	16.4	17.8	18.3	18.1	1.87	17.5	17.4	16.8	17.0
20.8	19.4	19.8	20.4	18.0	17.7	18.8	18.1	20.6	20.6	16.7	16.8
21.1	21.2	20.5	21.3	18.3	18.5	17.8	17.4	21.1	22.6	18.0	17.5
15.3	15.1	15.9	15.5	14.0	13.7	16.2	16.2	14.8	15.4	16.2	16.0
11.3	11.3	10.6	10.9	10.9	10.9	11.0	11.2	11.1	11.3	11.1	11.9
78.5	80.0	55.8	56.6	65.0	63.2	84.1	83.7	85.0	86.8	81.2	80.7
52.0	53.7	45.6	47.4	43.2	45.5	50.1	51.3	51.9	53.8	46.4	49.0
35.0	27.5	24.5	25.2	24.6	25.5	28.1	30.1	23.8	30.5	24.8	23.6
16.5	18.0	17.8	19.8	17.4	17.4	19.3	19.8	19.0	19.5	18.7	18.6
40.0	37.5	41.4	42.7	36.6	36.9	31.1	31.4	38.8	41.7	42.9	45.0
50.0	51.8	49.2	50.1	50.3	50.0	48.2	47.2	75.0	.....	54.2	55.3

² Baked weight.
⁴ 8-ounce package.

² 28-ounce package.
⁶ No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Little Rock, Ark.		Louisville, Ky.		Manchester, N. H.		Memphis, Tenn.	
		July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.
Sirloin steak.....	Lb..	40.6	37.2	38.1	36.7	¹ 56.6	¹ 57.2	41.8	40.8
Round steak.....	Lb..	39.5	34.8	37.5	35.6	50.2	50.8	39.1	38.1
Rib roast.....	Lb..	33.9	30.8	30.7	29.1	33.8	33.6	32.8	32.8
Chuck roast.....	Lb..	26.7	24.5	26.9	25.1	30.5	30.0	27.9	27.1
Plate beef.....	Lb..	21.6	19.5	21.9	20.7	.....	.....	23.2	21.6
Pork chops.....	Lb..	43.7	43.4	42.8	43.3	46.5	48.7	44.4	45.0
Bacon.....	Lb..	60.3	59.0	60.3	59.8	52.7	53.2	61.7	61.1
Ham.....	Lb..	58.2	57.5	59.2	59.5	53.6	53.7	59.7	59.4
Lamb.....	Lb..	39.5	36.9	37.5	32.1	41.1	40.5	40.5	38.9
Hens.....	Lb..	34.3	34.7	40.4	38.9	46.2	48.1	36.4	36.6
Salmon (canned).....	Lb..	31.9	34.4	29.9	30.2	30.8	31.3	33.2	35.1
Milk, fresh.....	Qt..	16.0	18.0	15.0	15.0	15.0	15.0	18.0	18.0
Milk, evaporated (unsweetened).....	(²)	16.8	16.9	15.5	16.1	17.1	17.4	17.1	17.4
Butter.....	Lb..	63.0	62.7	62.1	63.4	66.8	68.3	62.5	64.1
Oleomargarine.....	Lb..	43.4	43.7	44.3	44.6	41.5	42.1	42.9	44.7
Nut margarine.....	Lb..	38.6	37.3	35.0	35.0	35.3	35.3	41.5	42.3
Cheese.....	Lb..	43.2	43.4	42.6	42.1	42.6	42.6	42.7	43.5
Lard.....	Lb..	44.5	44.5	41.7	41.0	43.2	43.3	42.8	42.6
Crisco.....	Lb..	37.9	40.4	37.6	38.6	39.5	40.8	38.5	38.9
Eggs, strictly fresh.....	Doz.	48.8	53.3	45.9	48.2	68.1	73.3	46.8	52.4
Rolled oats.....	Lb..	11.0	11.0	9.0	9.0	8.8	9.4	10.4	10.6
Bread.....	Lb. ³	10.0	10.0	10.0	10.0	9.3	9.5	10.0	10.0
Flour.....	Lb..	7.5	7.5	7.4	7.4	7.8	7.7	7.6	7.4
Corn meal.....	Lb..	6.3	6.5	5.7	6.2	7.1	7.0	5.8	6.0
Corn flakes.....	(⁴)	14.8	14.8	14.4	14.4	14.8	14.8	14.1	14.1
Cream of Wheat.....	(⁵)	25.4	25.4	25.2	25.6	25.3	25.3	24.8	24.1
Macaroni.....	Lb..	19.3	18.6	17.2	18.2	23.9	23.5	18.7	18.5
Rice.....	Lb..	14.4	15.2	14.2	14.9	14.7	15.5	14.7	15.4
Beans, navy.....	Lb..	13.7	14.2	12.1	12.4	12.0	12.1	13.7	13.3
Potatoes.....	Lb..	3.9	5.6	3.9	4.2	5.4	5.9	5.2	5.7
Onions.....	Lb..	8.9	9.2	6.9	5.9	12.7	9.1	8.0	8.0
Cabbage.....	Lb..	5.7	7.8	4.3	6.8	9.3	4.4	5.5	6.5
Beans, baked.....	(⁶)	17.4	16.9	16.4	16.5	18.5	17.6	18.3	18.3
Corn, canned.....	(⁶)	18.0	17.9	18.2	18.2	21.7	21.7	18.7	18.5
Peas, canned.....	(⁶)	18.3	18.5	18.8	18.7	20.9	20.6	18.4	18.8
Tomatoes, canned.....	(⁶)	15.2	14.9	14.9	15.3	16.7	17.8	15.8	16.8
Sugar, granulated.....	Lb..	11.4	11.6	11.2	11.4	10.8	11.0	11.3	11.4
Tea.....	Lb..	87.4	89.5	80.4	81.7	61.9	61.9	86.9	88.5
Coffee.....	Lb..	51.3	52.8	48.9	49.8	47.8	49.3	50.9	52.3
Prunes.....	Lb..	22.1	23.8	23.8	27.0	25.6	26.8	29.2	28.4
Raisins.....	Lb..	19.3	20.3	17.0	17.6	18.0	18.9	17.8	17.0
Bananas.....	Doz.	38.5	36.8	36.9	37.4	37.5	40.0	39.5	40.0
Oranges.....	Doz.	57.8	57.7	44.6	45.5	51.7	50.8	51.5	51.8

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

³ 15-16-ounce cans.

FOOD ON JULY 15 AND AUG. 15, 1919, FOR 31 CITIES—Continued.

Minneapolis, Minn.		Mobile, Ala.		Newark, N. J.		New Haven, Conn.		Norfolk, Va.		Omaha, Nebr.	
July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.
38.2	35.5	36.4	34.6	47.8	47.7	55.2	55.4	47.6	47.5	42.8	40.5
36.8	34.1	35.9	34.6	48.6	48.2	49.8	50.1	43.3	43.2	40.8	37.9
31.5	29.7	30.9	30.4	37.9	38.3	40.1	40.3	37.3	38.0	30.9	29.4
25.0	23.7	25.9	25.4	30.9	29.9	33.7	34.3	30.0	30.8	27.6	25.3
17.2	15.7	21.3	21.4	21.7	21.6	.....	.....	21.5	21.7	19.4	18.5
43.9	43.1	48.0	49.6	47.3	49.2	48.1	49.0	44.2	45.3	45.0	42.6
61.0	61.1	62.5	62.5	51.8	50.9	60.0	59.9	56.8	58.8	62.1	60.3
58.5	60.8	55.6	55.5	57.5	55.0	62.5	63.1	52.9	50.0	60.9	60.3
34.4	30.9	36.4	37.1	39.9	38.8	42.8	41.9	42.5	42.1	37.4	35.8
35.0	34.9	42.5	42.0	43.8	44.5	46.7	47.1	46.1	45.3	37.8	37.2
37.3	40.0	32.0	32.1	34.0	34.6	33.5	33.6	30.8	30.5	32.2	33.1
12.0	13.0	18.3	18.3	16.0	16.7	14.4	16.0	21.0	21.0	14.1	14.4
16.1	16.8	17.0	17.9	14.8	15.2	16.1	16.3	15.9	16.0	17.1	17.3
56.4	58.0	64.0	66.5	63.3	64.8	62.1	63.4	68.1	68.9	60.9	61.8
39.2	41.1	42.6	44.9	41.1	42.0	42.4	42.9	46.2	48.0	43.6	43.8
32.2	32.3	41.4	43.0	35.4	35.1	36.0	36.4	40.7	39.0	35.6	35.5
40.8	41.7	42.3	42.5	44.2	44.9	43.3	43.5	43.3	43.5	43.2	44.2
42.4	40.9	43.0	43.3	43.1	43.8	42.2	42.1	42.8	43.3	44.4	44.3
38.6	40.5	36.8	39.3	38.2	40.0	38.7	40.3	38.4	39.6	38.7	41.3
47.7	50.1	49.5	57.4	65.1	68.3	70.1	76.8	55.3	55.6	48.9	50.1
6.6	7.0	10.7	11.2	8.6	8.6	8.9	9.1	10.0	10.3	8.7	8.3
9.6	9.6	9.7	9.6	9.8	9.8	10.0	10.5	9.9	9.9	10.0	10.0
7.2	7.2	7.5	7.4	7.7	7.6	7.6	7.5	7.8	7.7	7.1	7.0
6.5	6.5	6.3	6.5	7.3	7.0	7.6	7.8	6.1	6.2	6.3	6.4
14.4	14.4	14.7	14.7	12.6	12.5	13.9	13.9	14.4	14.4	15.0	14.7
25.1	25.4	26.0	25.4	23.7	23.6	24.4	24.3	25.6	25.2	25.5	25.3
18.9	18.8	19.6	19.1	20.0	19.8	20.7	20.7	20.1	20.2	19.6	18.8
14.9	15.6	14.0	15.4	15.0	16.5	15.4	15.7	16.0	16.6	14.7	15.0
10.6	10.8	13.5	13.9	12.6	12.6	12.6	12.5	12.0	13.3	12.8	12.5
4.4	3.7	5.4	6.2	5.2	5.2	4.7	4.5	4.7	5.4	4.9	4.9
11.0	7.8	10.2	9.1	10.2	8.4	10.6	8.5	11.9	8.8	9.4	7.6
3.6	3.6	5.7	5.5	5.6	4.4	7.2	4.2	5.3	5.4	4.3	5.1
18.7	19.1	17.7	17.6	15.4	15.3	18.4	18.2	14.8	14.6	20.9	19.5
16.9	17.1	19.8	20.0	21.1	20.6	21.9	22.1	22.0	21.9	17.9	17.5
17.2	17.3	19.6	19.7	19.9	19.7	22.2	21.5	22.5	22.5	18.5	18.2
16.5	16.5	14.9	14.9	14.4	14.7	16.3	16.7	17.5	17.7	17.0	16.8
10.8	11.2	11.1	11.3	10.3	10.7	10.9	11.1	11.0	11.2	11.1	11.1
61.0	62.8	76.6	79.1	56.6	56.1	61.8	61.4	81.8	85.3	77.4	75.3
48.8	52.9	40.5	43.6	44.4	45.2	47.7	48.5	49.4	51.1	49.1	49.7
26.6	27.2	24.7	26.9	30.1	30.4	27.5	26.8	26.7	26.2	27.1	27.0
16.5	16.9	18.3	19.5	16.1	16.8	17.4	17.7	16.9	16.9	20.3	18.7
43.8	41.4	30.4	30.0	39.0	40.0	36.7	36.4	38.6	39.2	45.0	40.0
54.6	54.7	57.1	60.0	59.3	60.3	55.6	56.2	56.2	52.3	51.6	53.5

^a Baked weight.
^d 8-ounce package.

^b 28-ounce package.
^e No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Peoria, Ill.		Portland, Me.		Portland, Oreg.		Providence, R. I.	
		July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.
Sirloin steak.....	Lb..	37.8	36.6	¹ 59.9	¹ 58.2	33.7	33.4	¹ 66.4	¹ 66.5
Round steak.....	Lb..	37.6	36.1	50.7	52.8	32.6	31.8	53.9	53.9
Rib roast.....	Lb..	28.6	27.4	33.1	33.1	30.4	29.4	41.7	42.3
Chuck roast.....	Lb..	25.8	25.4	26.5	26.2	23.7	22.8	36.1	36.1
Plate beef.....	Lb..	20.1	18.7	.....	.....	17.5	16.7	.....	.....
Pork chops.....	Lb..	43.2	42.0	47.6	48.9	47.7	48.2	50.0	52.6
Bacon.....	Lb..	58.9	57.6	53.0	54.2	62.2	61.4	54.4	54.5
Ham.....	Lb..	57.5	57.0	57.2	57.0	60.0	59.8	67.4	66.8
Lamb.....	Lb..	36.5	37.1	40.7	37.6	34.8	33.2	43.5	41.9
Hens.....	Lb..	37.7	36.2	49.3	47.8	39.8	38.6	47.1	48.3
Salmon (canned).....	Lb..	31.3	31.1	29.6	29.9	35.3	36.5	35.3	35.7
Milk, fresh.....	Qt..	11.8	14.3	14.0	14.3	15.0	15.2	15.0	15.5
Milk, evaporated (unsweetened). (2)		17.2	17.6	16.6	17.2	15.0	16.7	16.1	16.8
Butter.....	Lb..	59.7	61.0	68.0	69.1	63.6	66.5	63.4	64.6
Oleomargarine.....	Lb..	43.1	43.8	43.6	43.2	41.5	40.8	38.9	40.3
Nut margarine.....	Lb..	36.6	36.8	36.2	35.8	36.0	36.6	34.3	34.4
Cheese.....	Lb..	44.1	44.1	44.1	43.8	45.2	45.7	42.6	42.7
Lard.....	Lb..	42.6	41.9	43.9	44.0	40.2	41.2	42.9	42.6
Crisco.....	Lb..	40.9	41.5	41.6	42.5	41.8	44.0	38.0	40.6
Eggs, strictly fresh.....	Doz.	48.9	50.5	69.3	74.9	55.3	59.8	72.3	76.3
Rolled oats.....	Lb..	9.1	9.5	7.4	7.9	8.5	8.5	8.8	8.4
Bread.....	Lb. ³	10.0	10.0	11.0	11.0	9.9 ⁴	9.9	10.7	10.7
Flour.....	Lb..	8.1	7.8	7.6	7.5	6.6	6.4	7.9	8.0
Corn meal.....	Lb..	6.5	6.7	6.5	6.7	7.5	7.3	6.2	6.3
Corn flakes.....	(4)	14.9	14.9	14.1	14.0	14.8	14.8	13.8	13.8
Cream of Wheat.....	(5)	26.9	26.8	25.0	25.1	28.6	29.0	24.6	24.5
Macaroni.....	Lb..	15.0	19.3	22.5	22.6	17.0	17.6	20.4	21.1
Rice.....	Lb..	14.6	14.9	14.3	14.9	14.4	15.2	14.0	14.6
Beans, navy.....	Lb..	12.2	12.3	11.7	12.1	10.6	10.7	11.8	11.9
Potatoes.....	Lb..	4.8	5.0	4.2	5.6	3.8	3.3	5.1	5.1
Onions.....	Lb..	10.0	9.1	12.1	8.0	7.4	5.9	11.3	8.0
Cabbage.....	Lb..	4.9	4.8	7.1	3.9	5.0	4.7	6.2	3.9
Beans, baked.....	(6)	19.5	18.8	18.8	19.1	22.9	23.3	16.6	16.7
Corn, canned.....	(6)	17.3	17.6	21.5	21.5	22.4	22.3	20.2	20.2
Peas, canned.....	(6)	18.8	18.3	20.9	21.3	22.1	21.9	20.1	20.1
Tomatoes, canned.....	(6)	15.8	15.2	20.0	20.3	19.8	19.7	17.1	16.9
Sugar, granulated.....	Lb..	11.4	11.8	10.5	10.5	10.7	10.7	10.6	10.8
Tea.....	Lb..	72.8	73.3	64.7	64.0	63.8	64.2	61.1	60.7
Coffee.....	Lb..	46.7	47.6	48.4	49.6	49.4	50.0	51.8	52.7
Prunes.....	Lb..	27.7	28.5	26.7	27.3	21.3	21.9	30.8	31.1
Raisins.....	Lb..	17.7	18.4	15.8	16.6	17.7	17.7	17.6	19.1
Bananas.....	Doz.	10.1	10.2	38.3	42.0	45.6	44.0	40.8	41.3
Oranges.....	Doz.	52.4	51.0	60.4	59.6	59.0	58.3	58.6	60.8

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

² 15-16 ounce can.

FOOD ON JULY 15 AND AUG. 15, 1919, FOR 31 CITIES—Concluded.

Richmond, Va.		Rochester, N. Y.		St. Paul, Minn.		Salt Lake City, Utah.		Scranton, Pa.		Springfield, Ill.	
July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.	July 15, 1919.	Aug. 15, 1919.
45.0	44.0	42.3	41.7	40.7	38.7	35.5	33.9	47.8	45.9	37.7	36.6
42.1	40.9	39.7	38.8	36.6	34.6	31.9	30.7	43.3	42.0	37.7	35.9
35.5	35.4	32.7	32.1	33.1	31.5	27.4	26.7	37.9	37.1	29.3	27.4
31.9	30.2	28.9	29.3	26.2	25.0	23.8	22.6	31.9	31.1	25.6	24.6
25.9	24.1	20.4	20.3	17.4	16.5	18.1	16.3	20.9	19.6	20.7	19.6
45.8	45.9	48.6	47.7	42.3	41.6	44.6	47.5	47.8	48.8	43.0	42.5
54.0	53.9	49.6	49.7	57.6	57.8	59.6	60.0	61.4	60.6	55.9	56.2
54.4	54.8	56.3	56.4	58.3	58.8	57.7	57.9	60.0	60.0	55.9	55.6
43.1	40.9	37.0	35.6	35.2	31.2	30.9	28.5	45.0	43.4	37.3	36.5
41.5	43.7	45.2	45.2	35.9	35.9	36.7	36.4	47.8	47.1	34.7	36.3
26.2	26.4	30.8	31.0	31.6	32.4	32.3	31.8	37.1	36.4	32.4	32.7
15.5	15.7	13.5	14.0	11.7	13.0	12.5	12.5	13.0	14.0	14.3	14.3
16.9	17.3	15.7	16.3	15.9	16.8	15.1	16.5	15.7	15.8	17.5	17.8
68.9	69.4	61.7	63.2	57.3	57.3	65.0	66.7	62.8	63.9	60.7	62.0
41.9	42.3	42.1	43.8	40.1	40.5	42.0	42.0	43.5	43.8	45.1	45.2
36.6	36.9	34.4	34.4	34.4	34.9	39.3	40.4	37.7	36.3	36.4	35.7
43.9	43.9	41.4	41.5	40.2	41.0	43.1	43.4	41.9	42.8	43.9	44.2
40.7	42.2	41.6	41.6	43.1	42.0	44.3	44.7	42.2	44.0	43.4	42.6
37.8	39.8	37.9	39.3	38.6	39.4	45.8	46.3	38.4	40.6	41.7	42.8
53.4	57.1	57.4	61.1	49.5	51.4	51.2	56.7	61.8	65.2	48.5	50.2
10.3	10.5	7.1	7.0	7.2	7.5	8.6	9.3	10.1	10.3	10.0	9.6
10.9	10.9	10.0	10.0	9.3	9.3	10.2	10.0	10.0	10.0	10.0	10.0
7.6	7.6	7.5	7.4	7.3	7.3	6.1	6.1	8.0	7.8	7.6	7.5
6.2	6.3	6.7	6.7	6.2	6.5	7.4	7.3	9.3	9.0	6.7	6.7
14.6	14.8	13.8	13.7	14.5	14.5	14.7	14.8	14.4	14.2	15.0	14.9
25.2	25.4	24.5	24.6	25.9	25.8	25.9	25.9	25.5	25.1	27.3	27.3
18.4	19.1	19.3	19.0	17.6	19.2	17.9	19.5	22.5	22.0	16.7	17.4
15.3	15.9	14.7	15.7	14.9	15.6	14.8	16.0	15.2	15.9	14.6	15.6
13.9	14.0	11.9	12.0	10.8	10.8	12.3	12.4	14.1	14.2	12.8	12.8
4.7	4.9	4.9	5.5	4.8	3.3	5.0	4.2	5.2	5.3	4.7	5.1
7.5	6.5	11.6	8.8	11.0	6.6	10.3	7.2	9.7	8.8	8.7	8.0
3.9	5.8	7.2	5.0	4.3	3.2	7.4	5.8	6.0	3.9	4.3	5.7
15.3	15.1	15.3	15.1	18.9	19.1	19.1	19.8	17.1	16.4	18.5	18.8
19.3	18.9	19.7	19.2	17.6	17.3	18.6	18.4	21.3	20.4	17.1	17.0
22.4	22.2	19.3	19.1	16.8	16.6	18.0	18.3	19.3	18.8	18.3	18.4
17.2	17.0	16.5	16.8	16.4	16.0	17.5	17.2	18.3	17.6	16.7	16.9
11.0	11.1	10.6	10.8	11.2	11.1	11.0	11.0	10.7	10.9	12.0	12.3
82.4	81.4	60.6	61.0	61.8	62.7	71.6	73.1	64.3	66.2	84.3	86.0
43.6	45.7	41.3	44.9	46.6	48.4	51.0	54.4	46.5	48.8	46.2	48.9
26.4	27.5	24.5	27.9	25.9	25.7	18.1	23.8	24.8	24.5	26.0	23.4
16.4	16.4	16.2	16.9	16.9	17.2	15.8	17.0	17.1	18.3	19.3	20.9
44.1	44.2	41.1	42.1	40.0	40.0	51.0	49.0	38.1	37.7	36.0	37.5
53.0	51.1	53.0	55.4	54.1	55.1	52.7	55.8	55.4	56.6	48.7	48.3

³ Baked weight.
⁴ 8-ounce package.

⁵ 28-ounce package.
⁶ No. 2 can.

Retail Prices of Dry Goods in the United States.

THE following table gives the average retail prices of 10 articles of dry goods for May 15 and October 15, 1918, and for February 15, May 15, and August 15, 1919. The averages given are based on the retail prices of standard brands only.

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON MAY 15 AND OCT. 15, 1918, AND ON FEB. 15, MAY 15, AND AUG. 15, 1919, IN 50 CITIES.

Article.	Unit.	Atlanta, Ga.					Baltimore, Md.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.200	\$0.250				\$0.235	\$0.350	\$0.215	\$0.150	\$0.250
Percale.....	do..	.299	.400	\$0.384	\$0.379	\$0.390	.316	.409	.361	.315	.407
Gingham, apron, 27 to 28 inch.....	do..	.267	.320	.274	.233	.250	.276	.292	.253	.240	.279
Gingham, dress, 27-inch.....	do..	.306	.383	.369	.343	.374	.290	.394	.323	.317	.348
Gingham, dress, 32-inch.....	do..		.521	.543	.525	.536		.521	.472	.531	.521
Muslin, bleached.....	do..	.321	.338	.280	.272	.328	.345	.381	.289	.273	.386
Sheeting, bleached, 9-4.....	do..	.730	.788	.744	.724	.826	.798	.890	.809	.793	.925
Sheets, bleached, 81 by 90.....	Each.	1.964	2.004	1.935	1.849	2.164	2.077	2.268	1.899	1.929	2.292
Outing flannel, 27 to 28 inch.....	Yard.	.306	.377	.337	.293	.376	.300	.392	.298	.346	.358
Flannel, white, wool, 27-inch.....	do..	1.000	.750	.750	.925	.850	1.000	.945	.945	1.100	.800
Blankets, cotton, 66 by 80.....	Pair..	4.375	4.792	5.490	4.987	6.250		5.938	5.175	5.900	5.725
		Birmingham, Ala.					Boston, Mass.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.210	\$0.210	\$0.177	\$0.150	\$0.198	\$0.197	\$0.220	\$0.190	\$0.190	\$0.217
Percale.....	do..	.305	.370	.310	.317	.413	.325	.397	.346	.279	.367
Gingham, apron, 27 to 28 inch.....	do..	.258	.279	.260	.213	.269	.305	.301	.275	.250	.261
Gingham, dress, 27-inch.....	do..	.287	.413	.358	.326	.340	.310	.368	.289	.267	.293
Gingham, dress, 32-inch.....	do..		.503	.518	.532	.502		.504	.516	.523	.491
Muslin, bleached.....	do..	.250	.331	.263	.270	.326	.309	.378	.302	.291	.367
Sheeting, bleached, 9-4.....	do..	.639	.698	.672	.640	.751	.751	.834	.798	.752	.802
Sheets, bleached, 81 by 90.....	Each.	1.594	1.838	1.742	1.716	1.931	1.950	2.164	2.026	1.909	2.107
Outing flannel, 27 to 28 inch.....	Yard.	.287	.349	.355	.293	.366	.391	.368	.311	.312	.323
Flannel, white, wool, 27-inch.....	do..	.690	.990				.950	1.125	1.000	1.117	1.117
Blankets, cotton, 66 by 80.....	Pair..	3.000	5.310	5.475	6.560	5.573	4.000	5.650	5.783	4.750	4.750
		Bridgeport, Conn.					Buffalo, N. Y.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.147	\$0.190	\$0.190	\$0.150	\$0.210	\$0.193	\$0.263	\$0.218	\$0.178	\$0.219
Percale.....	do..	.259	.395	.338	.295	.385	.316	.384	.363	.308	.364
Gingham, apron, 27 to 28 inch.....	do..	.260	.290	.260	.245	.250	.277	.307	.268	.230	.256
Gingham, dress, 27-inch.....	do..	.350	.377	.325	.304	.354	.328	.360	.355	.319	.344
Gingham, dress, 32-inch.....	do..		.544	.529	.501	.551		.579	.578	.583	.563
Muslin, bleached.....	do..	.290	.357	.280	.275	.345	.328	.346	.288	.289	.375
Sheeting, bleached, 9-4.....	do..	.723	.870	.797	.768	.914	.784	.854	.793	.766	.907
Sheets, bleached, 81 by 90.....	Each.	1.668	2.155	1.990	1.887	2.322	1.925	2.108	1.993	1.860	2.185
Outing flannel, 27 to 28 inch.....	Yard.	.235	.338	.320	.289	.315	.355	.377	.343	.283	.342
Flannel, white, wool, 27-inch.....	do..	1.000	.760	.783	.745	.745	1.013	.917	.886	.882	.776
Blankets, cotton, 66 by 80.....	Pair..	3.500	6.950	4.083		4.375	4.413	6.124	6.194	6.298	6.363

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON MAY 15 AND OCT. 15, 1918, AND ON FEB. 15, MAY 15, AND AUG. 15, 1919, IN 50 CITIES—Continued.

Article.	Unit.	Butte, Mont.					Charleston, S. C.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.150	\$0.168	\$0.174	\$0.150	\$0.165	\$0.220	\$0.253	\$0.159	\$0.158	\$0.218
Percale.....	do.	.300	.329	.330	.330	.350	.338	.388	.356	.316	.408
Gingham, apron, 27 to 28 inch.....	do.	.250	.250	.250	.220	.250	.258	.286	.228	.197	.263
Gingham, dress, 27 inch.....	do.	.317	.363	.310	.328	.353	.326	.350	.333	.308	.367
Gingham, dress, 32-inch.....	do.	.....	.533	.400	.448	.463	.....	.413	.428	.432	.513
Muslin, bleached.....	do.	.333	.363	.313	.259	.333	.303	.312	.275	.244	.394
Sheeting, bleached, 9-4.....	do.	.725	.839	.808	.836	.850	.670	.831	.745	.729	.800
Sheets, bleached, 81 by 90.....	Each.	2.000	2.242	2.200	2.133	2.292	1.796	2.016	2.032	1.801	2.186
Outing flannel, 27 to 28 inch.....	Yard.	.250	.349	.317	.314	.326	.318	.368	.294	.280	.353
Flannel, white, wool, 27-inch.....	do.	.....	.850	.925	.920	.800	.600	.650	.....	.....	1.000
Blankets, cotton, 66 by 80.....	Pair.	.....	5.990	5.817	5.800	6.150	4.500	5.160	.....	.....	5.000
		Chicago, Ill.					Cincinnati, Ohio.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.183	\$0.246	\$0.195	\$0.181	\$0.198	\$0.233	\$0.238	\$0.194	\$0.160	\$0.233
Percale.....	do.	.355	.350	.310	.348	.430	.283	.319	.295	.290	.365
Gingham, apron, 27 to 28 inch.....	do.	.250	.268	.212	.222	.252	.253	.270	.254	.230	.238
Gingham, dress, 27-inch.....	do.	.343	.363	.323	.330	.348	.290	.314	.298	.275	.323
Gingham, dress, 32-inch.....	do.	.....	.614	.626	.581	.627	.....	.588	.589	.562	.572
Muslin, bleached.....	do.	.307	.343	.300	.294	.363	.269	.303	.268	.256	.351
Sheeting, bleached, 9-4.....	do.	.822	.801	.762	.765	.936	.726	.798	.702	.701	.826
Sheets, bleached, 81 by 90.....	Each.	2.040	2.140	1.932	1.831	2.301	1.743	1.999	1.901	1.830	2.019
Outing flannel, 27 to 28 inch.....	Yard.	.349	.364	.353	.288	.333	.343	.388	.337	.300	.319
Flannel, white, wool, 27-inch.....	do.	1.095	.900	.....	.....	.915	.850	.650	.875	.....	1.095
Blankets, cotton, 66 by 80.....	Pair.	4.500	5.433	5.433	5.304	5.830	.....	6.400	6.375	.....	6.250
		Cleveland, Ohio.					Columbus, Ohio.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.201	\$0.233	\$0.155	\$0.150	\$0.200	\$0.196	\$0.230	\$0.180	\$0.176	\$0.196
Percale.....	do.	.320	.387	.315	.339	.431	.336	.383	.348	.343	.412
Gingham, apron, 27 to 28 inch.....	do.	.267	.309	.227	.250	.301	.250	.307	.285	.212	.250
Gingham, dress, 27-inch.....	do.	.300	.352	.297	.329	.358	.350	.371	.368	.354	.367
Gingham, dress, 32-inch.....	do.	.....	.545	.430	.515	.580	.....	.592	.566	.588	.619
Muslin, bleached.....	do.	.338	.358	.253	.290	.374	.309	.348	.267	.263	.405
Sheeting, bleached, 9-4.....	do.	.776	.829	.733	.758	.921	.769	.806	.781	.726	.874
Sheets, bleached, 81 by 90.....	Each.	1.965	2.124	1.650	1.777	2.200	1.906	2.047	1.919	1.877	2.114
Outing flannel, 27 to 28.....	Yard.	.360	.362	.304	.298	.368	.361	.424	.341	.329	.378
Flannel, white, wool, 27-inch.....	do.	1.250	1.175	.....	.....	1.350	1.200	1.125	.....	.900	.....
Blankets, cotton, 66 by 80.....	Pair.	5.333	5.938	5.475	6.542	6.750	5.500	6.567	6.370	5.980	5.717
		Dallas, Tex.					Denver, Colo.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.198	\$0.217	\$0.183	\$0.186	\$0.190	\$0.229	\$0.238	\$0.158	.....	\$0.190
Percale.....	do.	.330	.358	.338	.330	.366	.450	.490	.467	\$0.360	.429
Gingham, apron, 27 to 28 inch.....	do.	.225	.250	.233	.197	.250	.300	.342	.250	.250	.333
Gingham, dress, 27-inch.....	do.	.310	.325	.330	.320	.337	.350	.360	.389	.332	.364
Gingham, dress, 32-inch.....	do.	.....	.538	.549	.527	.520	.....	.638	.717	.671	.628
Muslin, bleached.....	do.	.282	.291	.263	.254	.324	.361	.370	.309	.287	.420
Sheeting, bleached, 9-4.....	do.	.672	.756	.704	.658	.800	.939	.953	.955	.839	1.068
Sheets, bleached, 81 by 90.....	Each.	1.628	1.925	1.866	1.656	1.978	2.397	2.359	2.377	2.082	2.673
Outing flannel, 27 to 28 inch.....	Yard.	.276	.340	.404	.274	.335	.390	.396	.408	.356	.366
Flannel, white, wool, 27-inch.....	do.	.....	.788	.788	.....	.750	1.500	1.140	1.067	1.025	1.067
Blankets, cotton, 66 by 80.....	Pair.	6.500	6.483	5.920	5.667	5.960	4.875	5.950	5.958	6.057	6.233

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON MAY 15 AND OCT. 15, 1918, AND ON FEB. 15, MAY 15, AND AUG. 15, 1919, IN 50 CITIES—Continued.

Article.	Unit.	Detroit, Mich.					Fall River, Mass.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25-inch.....	Yard.	\$0.210	\$0.202	\$0.227	\$0.164	\$0.198	\$0.190	\$0.190	\$0.170	\$0.170	\$0.170
Percale.....	do.	.326	.392	.336	.337	.363	.363	.373	.357	.308	.390
Gingham, apron, 27 to 28 inch.....	do.	.268	.287	.257	.241	.250	.266	.290	.277	.223	.270
Gingham, dress, 27-inch.....	do.	.275	.326	.332	.317	.335	.310	.316	.284	.293	.330
Gingham, dress, 32-inch.....	do.	.....	.540	.510	.489	.530	.....	.520	.510	.476	.505
Muslin, bleached.....	do.	.345	.366	.291	.291	.316	.304	.350	.301	.260	.300
Sheeting, bleached, 9-4.....	do.	.771	.840	.793	.760	.849	.727	.835	.863	.795	.820
Sheets, bleached, 81 by 90.....	Each.	2.083	2.188	2.019	1.908	2.079	1.690	2.080	1.883	1.824	1.993
Outing flannel, 27 to 28 inch.....	Yard.	.320	.361	.336	.293	.317	.240	.373	.303	.297	.290
Flannel, white, wool, 27-inch.....	do.	1.488	1.025	.....	.995	.....	.980	1.057	.....	.....	.....
Blankets, cotton, 66 by 80.....	Pair..	.....	4.696	5.000	5.238	4.930	.....	5.435	.....	5.980	5.980
		Houston, Tex.					Indianapolis, Ind.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25-inch.....	Yard.	.....	\$0.203	\$0.188	\$0.150	\$0.205	\$0.200	\$0.257	\$0.142	\$0.164	\$0.181
Percale.....	do.	.....	.350	.400	.348	.312	.314	.368	.328	.313	.358
Gingham, apron, 27 to 28 inch.....	do.	.....	.268	.270	.225	.245	.245	.304	.228	.263	.253
Gingham, dress, 27-inch.....	do.	.....	.329	.360	.297	.330	.277	.349	.305	.320	.314
Gingham, dress, 32-inch.....	do.	.....	.512	.625	.553	.604	.....	.508	.439	.468	.498
Muslin, bleached.....	do.	.....	.301	.285	.259	.310	.302	.326	.289	.292	.313
Sheeting, bleached, 9-4.....	do.	.....	.755	.713	.608	.792	.752	.829	.767	.780	.855
Sheets, bleached, 81 by 90.....	Each.	.....	1.883	1.695	1.577	1.878	1.688	2.054	1.951	1.897	2.094
Outing flannel, 27 to 28 inch.....	Yard.	.....	.360	.275	.265	.281	.326	.378	.328	.293	.312
Flannel, white, wool, 27-inch.....	do.	.....	.615	.670	.722	.823	.980	.835	.923	.895	.827
Blankets, cotton, 66 by 80.....	Pair..	.....	7.467	6.125	6.433	7.225	4.827	5.988	5.893	5.495	6.050
		Jacksonville, Fla.					Kansas City, Mo.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25-inch.....	Yard.	\$0.193	\$0.254	\$0.180	\$0.225	\$0.180	\$0.235	\$0.247	\$0.190	\$0.184	\$0.196
Percale.....	do.	.320	.442	.427	.445	.463	.350	.436	.438	.373	.458
Gingham, apron, 27 to 28 inch.....	do.	.300	.314	.290	.263	.290	.295	.316	.273	.250	.316
Gingham, dress, 27-inch.....	do.	.343	.368	.350	.370	.370	.326	.390	.386	.369	.367
Gingham, dress, 32-inch.....	do.	.....	.524	.445	.528	.542	.....	.588	.562	.610	.601
Muslin, bleached.....	do.	.338	.348	.307	.330	.413	.319	.359	.311	.324	.423
Sheeting, bleached, 9-4.....	do.	.740	.831	.775	.850	.950	.790	.894	.818	.828	.943
Sheets, bleached, 81 by 90.....	Each.	2.003	2.035	2.000	2.117	2.188	1.760	2.229	1.915	1.910	2.500
Outing flannel, 27 to 28 inch.....	Yard.	.317	.351	.330	.288	.330	.310	.400	.370	.351	.355
Flannel, white, wool, 27-inch.....	do.	.750	.775	.....	.650	.....	1.167	.....	.890	.....	.....
Blankets, cotton, 66 by 80.....	Pair..	6.000	5.995	6.500	6.500	5.740	3.750	6.108	6.480	6.000	5.745
		Little Rock, Ark.					Los Angeles, Calif.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25-inch.....	Yard.	\$0.229	\$0.201	\$0.169	\$0.188	\$0.197	.....	\$0.255	\$0.207	\$0.186	\$0.218
Percale.....	do.	.317	.361	.322	.322	.356	\$0.329	.439	.439	.379	.425
Gingham, apron, 27 to 28 inch.....	do.	.238	.280	.248	.225	.250	.280	.350	.263	.263	.279
Gingham, dress, 27-inch.....	do.	.285	.325	.291	.316	.322	.297	.400	.371	.361	.391
Gingham, dress, 32-inch.....	do.	.....	.495	.468	.432	.483	.....	.549	.538	.600	.616
Muslin, bleached.....	do.	.284	.309	.249	.269	.334	.339	.360	.317	.275	.367
Sheeting, bleached, 9-4.....	do.	.700	.806	.788	.729	.899	.740	.812	.769	.755	.806
Sheets, bleached, 81 by 90.....	Each.	1.708	1.915	1.759	1.819	1.936	1.944	2.066	1.968	1.853	2.025
Outing flannel, 27 to 28 inch.....	Yard.	.291	.336	.270	.281	.332	.350	.397	.392	.360	.385
Flannel, white, wool, 27-inch.....	do.	.750	1.125	.764	1.000	1.025	1.250	1.100	.....	.900	1.300
Blankets, cotton, 66 by 80.....	Pair..	3.750	4.910	4.531	5.000	5.125	4.500	5.969	6.417	6.494	6.400

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON MAY 15 AND OCT. 15, 1918, AND ON FEB. 15, MAY 15, AND AUG. 15, 1919, IN 50 CITIES—Continued.

Article.	Unit.	Louisville, Ky.					Manchester, N. H.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.180	\$0.244	\$0.160	\$0.190	\$0.207	\$0.223	\$0.279	\$0.161	\$0.215	\$0.232
Percale.....	do.	.325	.410	.348	.340	.382	.305	.396	.358	.277	.421
Gingham, apron, 27 to 28 inch.....	do.	.263	.299	.248	.202	.258	.300	.284	.261	.220	.254
Gingham, dress, 27-inch.....	do.	.322	.403	.401	.323	.361	.353	.353	.318	.281	.344
Gingham, dress, 32-inch.....	do.	.....	.583	.559	.564	.608	.....	.513	.492	.406	.557
Muslin, bleached.....	do.	.292	.341	.263	.286	.353	.334	.355	.275	.283	.380
Sheeting, bleached, 9-4.....	do.	.689	.778	.739	.730	.835	.777	.834	.734	.699	.901
Sheets, bleached, 81 by 90.....	Each.	1.818	1.961	2.064	1.967	2.120	2.101	1.958	1.774	1.688	2.379
Outing flannel, 27 to 28 inch.....	Yard.	.377	.403	.374	.377	.328	.283	.388	.275	.277	.322
Flannel, white, wool, 27-inch.....	do.	.850	.850	.....	.....	.770	1.250	1.285	.....	.....	.....
Blankets, cotton, 66 by 80.....	Pair.	4.500	5.960	6.125	.....	6.342	.....	4.926	4.779	5.426	4.794
		Memphis, Tenn.					Milwaukee, Wis.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.235	\$0.259	\$0.221	\$0.184	\$0.199	\$0.180	\$0.209	\$0.170	\$0.153	\$0.236
Percale.....	do.	.333	.424	.380	.356	.407	.316	.430	.345	.344	.435
Gingham, apron, 27 to 28 inch.....	do.	.280	.293	.263	.230	.260	.258	.278	.246	.226	.270
Gingham, dress, 27-inch.....	do.	.333	.352	.330	.288	.363	.280	.345	.323	.330	.350
Gingham, dress, 32-inch.....	do.	.....	.546	.553	.563	.582	.....	.549	.542	.510	.549
Muslin, bleached.....	do.	.322	.348	.285	.284	.353	.313	.335	.304	.295	.375
Sheeting, bleached, 9-4.....	do.	.786	.854	.788	.738	.909	.752	.825	.814	.739	.860
Sheets, bleached, 81 by 90.....	Each.	1.981	2.164	1.978	2.024	2.271	2.248	2.133	1.981	1.887	2.227
Outing flannel, 27 to 28 inch.....	Yard.	.288	.360	.331	.290	.341	.320	.331	.313	.329	.345
Flannel, white, wool, 27-inch.....	do.	1.250	1.350	.....	.....	.....	.....	.850	.600	.825	1.000
Blankets, cotton, 66 by 80.....	Pair.	5.500	6.033	5.777	5.921	6.280	5.377	6.079	6.520	5.904	6.058
		Minneapolis, Minn.					Mobile, Ala.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.183	\$0.226	\$0.156	\$0.166	\$0.192	.....	\$0.246	\$0.190	\$0.154	\$0.225
Percale.....	do.	.313	.387	.357	.366	.376	.....	.373	.362	.311	.350
Gingham, apron, 27 to 28 inch.....	do.	.229	.273	.256	.237	.250	.....	.280	.213	.193	.250
Gingham, dress, 27-inch.....	do.	.306	.346	.336	.329	.349	.....	.358	.295	.301	.347
Gingham, dress, 32-inch.....	do.	.....	.606	.610	.581	.582	.....	.531	.500	.477	.530
Muslin, bleached.....	do.	.313	.340	.285	.278	.354	.....	.341	.275	.258	.346
Sheeting, bleached, 9-4.....	do.	.750	.812	.741	.698	.855	.....	.806	.698	.595	.690
Sheets, bleached, 81 by 90.....	Each.	1.998	2.163	1.950	1.896	2.186	.....	2.071	2.000	1.620	1.827
Outing flannel, 27 to 28 inch.....	Yard.	.328	.408	.319	.313	.354	.....	.353	.221	.276	.290
Flannel, white, wool, 27-inch.....	do.	.977	.800	.....	1.000	1.000	.....	.....	.....	.650	.675
Blankets, cotton, 66 by 80.....	Pair.	4.250	5.762	5.497	5.732	5.920	.....	6.107	6.740	.....	5.500
		Newark, N. J.					New Haven, Conn.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.200	\$0.260	\$0.173	\$0.177	\$0.198	\$0.190	\$0.233	\$0.240	.....	\$0.145
Percale.....	do.	.350	.430	.325	.330	.366	.290	.393	.346	.321	.346
Gingham, apron, 27 to 28 inch.....	do.	.260	.270	.230	.203	.250	.290	.293	.248	.194	.241
Gingham, dress, 27-inch.....	do.	.328	.373	.284	.290	.340	.296	.338	.324	.257	.333
Gingham, dress, 32-inch.....	do.	.....	.553	.516	.533	.555	.....	.537	.528	.505	.531
Muslin, bleached.....	do.	.293	.330	.291	.317	.345	.331	.351	.286	.269	.334
Sheeting, bleached, 9-4.....	do.	.776	.849	.761	.771	.839	.773	.778	.699	.670	.825
Sheets, bleached, 81 by 90.....	Each.	1.877	2.072	1.849	1.916	2.113	1.878	1.975	1.763	1.696	2.003
Outing flannel, 27 to 28 inch.....	Yard.	.354	.372	.307	.272	.341	.295	.342	.296	.243	.276
Flannel, white, wool, 27-inch.....	do.	1.367	1.650	1.450	1.250	1.220	1.238	1.013	.925	.883	.790
Blankets, cotton, 66 by 80.....	Pair.	4.240	5.750	4.750	4.958	5.250	3.500	4.688	4.495	4.796	4.872

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON MAY 15 AND OCT. 15, 1918, AND ON FEB. 15, MAY 15, AND AUG. 15, 1919, IN 50 CITIES—Continued.

Article.	Unit.	New Orleans, La.					New York, N. Y.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.200	\$0.250	\$0.150	\$0.150	\$0.269	\$0.265	\$0.264	\$0.210	\$0.205	\$0.270
Percale.....	do.	.400	.375	.320	.350	.450	.357	.424	.371	.343	.419
Gingham, apron, 27 to 28 inch.....	do.	.288	.267	.250	.250	.250	.281	.231	.247	.212	.290
Gingham, dress, 27-inch.....	do.	.313	.336	.283	.287	.312	.315	.368	.347	.335	.361
Gingham dress, 32-inch.....	do.	.....	.459	.520	.508	.552	.....	.552	.777	.616	.625
Muslin, bleached.....	do.	.267	.317	.238	.227	.324	.343	.366	.288	.288	.349
Sheeting, bleached, 9-4.....	do.	.660	.760	.750	.620	.705	.809	.923	.797	.757	.892
Sheets, bleached, 81 by 90.....	Each.	1.667	1.888	1.898	1.788	1.795	2.055	2.189	1.909	1.878	2.199
Outing flannel, 27 to 28 inch.....	Yard.	.300	.339	.350	.300	.296	.366	.388	.324	.307	.304
Flannel, white, wool, 27-inch.....	do.	.....	.....	.....	.506	.....	1.046	1.022	.911	1.029	.890
Blankets, cotton, 66 by 80.....	Pair.	.....	7.000	4.540	5.980	5.500	5.250	5.750	5.686	5.524	5.238
		Norfolk, Va.					Omaha, Nebr.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.159	\$0.250	\$0.220	\$0.250	.....	\$0.209	\$0.237	\$0.169	\$0.162	\$0.194
Percale.....	do.	.335	.434	.360	.330	\$0.400	.328	.389	.377	.348	.389
Gingham, apron, 27 to 28 inch.....	do.	.290	.295	.270	.250	.266	.250	.287	.270	.232	.270
Gingham, dress, 27-inch.....	do.	.317	.365	.336	.355	.370	.294	.367	.345	.337	.342
Gingham, dress, 32-inch.....	do.	.....	.572	.557	.536	.607	.....	.608	.595	.596	.612
Muslin, bleached.....	do.	.301	.354	.292	.277	.354	.292	.362	.317	.289	.371
Sheeting, bleached, 9-4.....	do.	.718	.782	.791	.792	.870	.732	.776	.726	.726	.888
Sheets, bleached, 81 by 90.....	Each.	1.752	2.062	1.916	1.786	2.159	1.956	2.071	1.853	2.013	2.157
Outing flannel, 27 to 28 inch.....	Yard.	.288	.352	.311	.310	.360	.330	.371	.346	.328	.358
Flannel, white, wool, 27-inch.....	do.	.....	1.000	.875	1.125	1.125	1.123	1.163	1.125	1.150	.945
Blankets, cotton, 66 by 80.....	Pair.	.....	6.796	5.183	5.990	6.500	4.345	6.667	6.133	6.381	5.886
		Peoria, Ill.					Philadelphia, Pa.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.138	\$0.207	\$0.213	\$0.180	\$0.169	\$0.225	\$0.211	\$0.159	\$0.207	.....
Percale.....	do.	.315	.343	.330	.336	.330	.338	.376	.307	.304	\$0.382
Gingham, apron, 27 to 28 inch.....	do.	.230	.223	.250	.230	.245	.290	.289	.239	.203	.280
Gingham, dress, 27-inch.....	do.	.287	.307	.335	.328	.350	.330	.367	.290	.320	.343
Gingham, dress, 32-inch.....	do.	.....	.513	.530	.581	.580	.....	.521	.534	.537	.515
Muslin, bleached.....	do.	.279	.350	.307	.277	.342	.303	.329	.283	.288	.348
Sheeting, bleached, 9-4.....	do.	.705	.705	.877	.824	1.007	.715	.866	.761	.754	.829
Sheets, bleached, 81 by 90.....	Each.	1.773	2.208	2.126	2.148	2.376	1.780	2.047	1.856	1.813	1.990
Outing flannel, 27 to 28 inch.....	Yard.	.316	.340	.379	.353	.353	.330	.391	.308	.285	.325
Flannel, white, wool, 27-inch.....	do.	.....	.....	.....	.....	.....	.993	1.022	.938	1.070	.854
Blankets, cotton, 66 by 80.....	Pair.	.....	6.125	5.883	5.700	6.217	5.000	4.836	5.153	5.472	5.376
		Pittsburgh, Pa.					Portland, Me.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.204	\$0.276	\$0.209	\$0.167	\$0.173	\$0.250	.....	.....	.....	.....
Percale.....	do.	.320	.361	.326	.310	.350	.323	.398	.....	.....	\$0.390
Gingham, apron, 27 to 28 inch.....	do.	.253	.286	.241	.192	.220	.310	.310	.....	.....	.250
Gingham, dress, 27-inch.....	do.	.301	.339	.305	.309	.340	.315	.390	.....	.....	.336
Gingham, dress, 32-inch.....	do.	.....	.554	.526	.541	.515	.....	.535	.....	.....	.550
Muslin, bleached.....	do.	.278	.338	.281	.267	.298	.298	.338	.....	.....	.331
Sheeting, bleached, 9-4.....	do.	.721	.857	.785	.727	.790	.688	.775	.....	.....	.785
Sheets, bleached, 81 by 90.....	Each.	1.821	2.090	1.788	1.707	1.797	1.780	1.976	.....	.....	1.990
Outing flannel, 27 to 28 inch.....	Yard.	.278	.352	.324	.302	.333	.238	.373	.....	.....	.329
Flannel, white, wool, 27-inch.....	do.	1.063	.800	.760	.785	.875	.....	1.222	.....	.....	.....
Blankets, cotton, 66 by 80.....	Pair.	4.850	6.536	5.957	5.750	.....	.....	5.495	.....	.....	5.400

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON MAY 15 AND OCT. 15, 1918, AND ON FEB. 15, MAY 15, AND AUG. 15, 1919, IN 50 CITIES—Continued.

Article.	Unit.	Portland, Oreg.					Providence, R. I.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.179	\$0.239	\$0.142	\$0.148	\$0.195	\$0.196	\$0.274	\$0.186	\$0.190	.....
Percale.....	do.	.300	.370	.400	.358	.400	.300	.372	.320	.300	\$0.343
Gingham, apron, 27 to 28 inch.....	do.	.250	.280	.200	.200	.250	.278	.297	.240	.214	.270
Gingham, dress, 27-inch.....	do.	.263	.366	.340	.338	.350	.282	.370	.306	.316	.321
Gingham, dress, 32-inch.....	do.	.....	.480	.450	.693	.663	.....	.523	.474	.495	.560
Muslin, bleached.....	do.	.290	.325	.258	.277	.371	.313	.352	.263	.257	.349
Sheeting, bleached, 9-4.....	do.	.732	.769	.700	.700	.897	.727	.823	.724	.766	.922
Sheets, bleached, 81 by 90.....	Each.	1.993	1.960	1.900	1.889	2.300	1.853	2.230	2.078	1.734	2.435
Outing flannel, 27 to 28 inch.....	Yard.	.360	.347	.333	.335	.363	.....	.390	.323	.255	.284
Flannel, white, wool, 27-inch.....	do.	.....	.983	.....	1.100	.....	1.013	.990	.990	.915	.930
Blankets, cotton, 66 by 80.....	Pair.	.....	6.063	.....	5.690	6.500	4.410	6.018	5.995	6.058	5.495
		Richmond, Va.					Rochester, N. Y.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.203	\$0.238	\$0.188	\$0.164	\$0.205	\$0.185	\$0.198	\$0.138	\$0.128	\$0.188
Percale.....	do.	.297	.409	.348	.318	.405	.325	.372	.285	.277	.387
Gingham, apron, 27 to 28 inch.....	do.	.263	.294	.247	.206	.254	.227	.248	.238	.194	.205
Gingham, dress, 27-inch.....	do.	.305	.342	.320	.290	.315	.246	.337	.309	.276	.322
Gingham, dress, 32-inch.....	do.	.....	.471	.457	.436	.489	.....	.522	.562	.561	.627
Muslin, bleached.....	do.	.320	.365	.293	.273	.369	.269	.309	.266	.246	.346
Sheeting, bleached, 9-4.....	do.	.854	.844	.787	.742	.908	.688	.775	.696	.712	.889
Sheets, bleached, 81 by 90.....	Each.	2.000	2.075	1.906	1.849	2.210	1.830	2.075	1.934	1.783	2.153
Outing flannel, 27 to 28 inch.....	Yard.	.290	.353	.330	.308	.348	.284	.355	.304	.282	.325
Flannel, white, wool, 27-inch.....	do.	.935	.914	.971	.852	.795	.....	.590	1.375	.....	1.250
Blankets, cotton, 66 by 80.....	Pair.	.....	6.237	5.618	5.678	5.903	5.865	5.988	6.493	5.500	5.517
		St. Louis, Mo.					St. Paul, Minn.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.192	\$0.250	\$0.208	\$0.195	\$0.220	\$0.202	\$0.214	\$0.157	\$0.156	\$0.216
Percale.....	do.	.350	.430	.370	.320	.430	.330	.361	.308	.296	.378
Gingham, apron, 27 to 28 inch.....	do.	.250	.290	.255	.220	.280	.255	.284	.249	.220	.240
Gingham, dress, 27-inch.....	do.	.313	.372	.334	.289	.387	.314	.349	.315	.309	.359
Gingham, dress, 32-inch.....	do.	.....	.651	.585	.594	.685	.....	.538	.541	.484	.597
Muslin, bleached.....	do.	.298	.361	.275	.249	.362	.353	.344	.324	.277	.354
Sheeting, bleached, 9-4.....	do.	.725	.810	.712	.689	.895	.788	.867	.809	.733	.895
Sheets, bleached, 81 by 90.....	Each.	1.871	1.987	1.891	1.900	2.281	2.147	2.227	2.128	1.861	2.230
Outing flannel, 27 to 28 inch.....	Yard.	.333	.388	.328	.351	.367	.316	.359	.316	.278	.322
Flannel, white, wool, 27-inch.....	do.	1.100	.875	.775	.933	.800	1.115	.....	.....	.980	.....
Blankets, cotton, 66 by 80.....	Pair.	.....	6.750	6.690	6.500	5.245	.....	5.542	5.971	5.698	6.675
		Salt Lake City, Utah.					San Francisco, Calif.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.183	\$0.204	\$0.169	\$0.158	\$0.190	\$0.392	\$0.460	\$0.400	\$0.417	\$0.367
Percale.....	do.	.335	.424	.395	.351	.384	.300	.317	.288	.288	.400
Gingham, apron, 27 to 28 inch.....	do.	.250	.294	.235	.245	.262	.283	.300	.288	.288	.320
Gingham, dress, 27-inch.....	do.	.331	.366	.349	.329	.377	.306	.350	.336	.333	.360
Gingham, dress, 32-inch.....	do.	.....	.656	.710	.635	.586	.....	.545	.550	.500	.525
Muslin, bleached.....	do.	.304	.329	.311	.294	.377	.328	.336	.210	.286	.355
Sheeting, bleached, 9-4.....	do.	.757	.826	.793	.762	.871	.838	.854	.800	.771	.865
Sheets, bleached, 81 by 90.....	Each.	2.233	2.082	2.027	1.971	2.152	2.090	2.077	1.934	1.905	2.122
Outing flannel, 27 to 28 inch.....	Yard.	.311	.388	.382	.319	.361	.356	.418	.381	.359	.408
Flannel, white, wool, 27-inch.....	do.	1.050	1.573	1.350	1.258	1.750	1.250	1.200	.750	.750	1.000
Blankets, cotton, 66 by 80.....	Pair.	.....	6.366	5.675	6.980	7.596	.....	5.762	6.379	5.943	6.529

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON MAY 15 AND OCT. 15, 1918, AND ON FEB. 15, MAY 15, AND AUG. 15, 1919, IN 50 CITIES—Concluded.

Article.	Unit.	Scranton, Pa.					Seattle, Wash.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.230	\$0.225	\$0.188	\$0.187	\$0.207	\$0.219	\$0.250	\$0.213	\$0.180	\$0.200
Percale.....	do.	.350	.337	.350	.285	.390	.342	.456	.389	.357	.418
Gingham, apron, 27 to 28 inch.....	do.	.268	.287	.260	.220	.290	.250	.300	.250	.240	.250
Gingham, dress, 27-inch.....	do.	.301	.344	.320	.291	.330	.338	.383	.306	.328	.328
Gingham, dress, 32-inch.....	do.	.....	.553	.517	.493	.594	.....	.510	.608	.560	.558
Muslin, bleached.....	do.	.324	.352	.284	.282	.347	.353	.344	.300	.253	.403
Sheeting, bleached, 9-4.....	do.	.711	.799	.777	.752	.771	.850	.900	.855	.767	1.090
Sheets, bleached, 81 by 90.....	Each.	1.988	2.013	1.954	1.902	2.053	2.167	2.319	2.200	1.929	2.850
Outing flannel, 27 to 28 inch.....	Yard.	.308	.371	.322	.312	.326	.335	.390	.362	.338	.385
Flannel, white, wool, 27-inch.....	do.	.750	.688	.790	.980	.....	1.200	1.083	.875	.875	.925
Blankets, cotton, 66 by 80.....	Pair.	5.000	5.842	5.993	6.288	6.653	5.750	5.890	6.050	5.675	6.083
		Springfield, Ill.					Washington, D. C.				
		1918		1919			1918		1919		
		May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.	May 15.	Oct. 15.	Feb. 15.	May 15.	Aug. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.207	\$0.233	\$0.168	\$0.160	\$0.192	\$0.263	\$0.198	\$0.200	.....	\$0.175
Percale.....	do.	.299	.400	.314	.335	.330	.350	.420	.348	\$3.338	.354
Gingham, apron, 27 to 28 inch.....	do.	.256	.283	.250	.240	.247	.300	.281	.244	.243	.263
Gingham, dress, 27-inch.....	do.	.319	.368	.321	.320	.341	.410	.390	.353	.381	.371
Gingham, dress, 32-inch.....	do.	.....	.529	.571	.499	.435	.....	.510	.559	.534	.587
Muslin, bleached.....	do.	.314	.316	.266	.262	.311	.350	.346	.268	.278	.344
Sheeting, bleached, 9-4.....	do.	.719	.778	.698	.737	.820	.831	.813	.801	.740	.858
Sheets, bleached, 81 by 90.....	Each.	1.664	1.803	1.780	1.967	2.081	2.081	2.144	1.890	1.876	2.347
Outing flannel, 27 to 28 inch.....	Yard.	.286	.341	.292	.284	.321	.400	.398	.315	.304	.339
Flannel, white, wool, 27-inch.....	do.	.....	.....	.....	.875	.....	.900	1.195	1.380	.....	1.250
Blankets, cotton, 66 by 80.....	Pair.	.....	5.483	4.000	4.650	5.196	4.500	5.556	6.500	7.500	6.156

Comparison of Retail Food Costs in 50 Cities in the United States.

THE table following shows for 39 cities the percentages of increase or decrease in the retail cost in August, 1919, of 22 food articles¹ combined, compared with the average cost in the year 1913, in August, 1918, and in July, 1919. For 11 other cities comparisons are given for the one-year and one-month periods, as these cities have been scheduled by the Bureau at different dates since 1913.

The average family expenditure is based on the prices sent to the Bureau each month by retail dealers, and on the average family consumption of these articles in each city.

The amounts given as the expenditures in August, 1918, and in July and August, 1919, represent the amounts necessary to buy a year's supply of these 22 food articles when purchased at the average retail prices charged in the months specified. This method makes it easier to compare the increase with the year 1913. This year has

¹ Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

been selected for the comparison because it was the last year before the war, when prices were normal.

No attempts should be made in this table to compare one city with another, as the average number of persons in the family varies according to the city, and these 22 food articles represent a varying proportion of the entire food budgets according to locality. This table is intended to show merely comparisons in the retail cost of these 22 food articles for each city. Effort is made to secure prices on similar grades of commodities in all cities. Local customs, however, must be taken into consideration. For example:

1. In Boston, Mass., Fall River, Mass., Manchester, N. H., New Haven, Conn., Portland, Me., and Providence, R. I., very little fresh plate beef is sold, and prices are not secured from these cities for this article.

2. The cut of beef known as "sirloin" in Boston, Mass., Manchester, N. H., Philadelphia, Pa., and Providence, R. I., would be known as "porterhouse" in other cities. In these four cities, owing to the method of dividing the round from the loin, there is no cut that corresponds to "sirloin" in other cities. There is also a greater amount of trimming demanded by the trade in these cities.

3. The most of the sales in Newark, N. J., are on whole ham instead of the sliced ham as in other cities.

While it is advised that comparisons should not be made as between cities, without taking these and other facts relative to local customs and transportation into consideration, the figures do represent the trend in the retail cost of these articles to the average family in each city.

RETAIL COST OF 22 FOOD ARTICLES,¹ COMBINED, IN AUGUST, 1919, COMPARED WITH THE COST IN JULY, 1919, AUGUST, 1918, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

City.	Average family expenditure, 22 food articles combined.				Percentage increase, August, 1919, compared with—		
	Year 1913.	August, ² 1918.	1919		1913	August, 1918.	July, 1919.
			July. ³	August. ³			
Atlanta.....	\$361.00	\$628.74	\$683.63	\$701.04	94	12	3
Baltimore.....	335.15	625.09	676.08	683.45	104	9	1
Birmingham.....	377.53	655.86	752.94	758.46	101	16	1
Boston.....	388.16	658.40	710.76	730.57	88	11	3
Bridgeport.....		631.91	682.50	685.07		8	(⁴)
Buffalo.....	318.15	574.31	626.82	638.05	101	11	2
Butte.....		466.40	490.69	484.44		4	⁴ 1
Charleston.....	348.60	615.07	690.88	699.19	101	14	1
Chicago.....	336.48	571.49	644.82	662.58	97	16	3
Cincinnati.....	338.26	562.15	646.36	636.28	88	13	⁴ 2
Cleveland.....	354.01	607.30	692.38	685.42	94	13	⁴ 1
Columbus.....		593.79	664.98	659.03		11	⁴ 1
Dallas.....	395.41	653.52	746.93	747.02	89	14	(⁵)
Denver.....	247.36	420.21	469.00	464.05	88	10	⁴ 1
Detroit.....	336.02	600.09	681.82	695.93	108	16	2
Fall River.....	375.51	641.06	701.53	708.27	89	10	1
Houston.....		638.48	707.19	712.94		12	1
Indianapolis.....	345.23	572.67	665.17	669.46	94	17	1
Jacksonville.....	377.10	612.39	681.58	699.82	86	14	3
Kansas City.....	340.12	577.25	645.57	654.34	92	13	1
Little Rock.....	390.14	671.31	722.18	736.35	89	10	2
Los Angeles.....	284.84	432.09	463.38	459.38	61	6	⁴ 1
Louisville.....	363.85	609.70	706.09	708.28	95	16	(⁵)
Manchester.....	366.01	640.94	694.78	710.78	94	11	2
Memphis.....	368.46	634.53	738.08	746.09	102	18	1
Milwaukee.....	327.25	562.21	651.97	663.72	103	18	2
Minneapolis.....	319.98	531.14	628.46	623.31	95	17	⁴ 1
Mobile.....		647.03	730.60	748.83		16	2
Newark.....	364.92	611.57	669.45	678.01	86	11	1
New Haven.....	376.96	664.04	701.17	717.94	90	8	2
New Orleans.....	369.29	620.70	708.37	716.72	94	15	1
New York.....	355.36	604.27	666.65	669.50	88	11	(⁵)
Norfolk.....		636.27	701.19	710.67		12	1
Omaha.....	334.52	575.47	666.61	657.52	97	14	⁴ 1
Peoria.....		555.85	644.97	650.68		17	1
Philadelphia.....	352.19	610.27	657.67	674.42	91	11	3
Pittsburgh.....	350.35	598.80	665.86	667.87	91	12	(⁵)
Portland, Me.....		635.60	690.69	711.02		12	3
Portland, Oreg.....	266.03	436.44	462.71	461.53	73	6	(⁵)
Providence.....	380.85	677.33	734.35	742.27	95	10	1
Richmond.....	346.40	616.03	682.32	690.23	99	12	1
Rochester.....		577.56	630.14	641.81		11	2
St. Louis.....	326.36	578.37	642.57	644.30	97	11	(⁵)
St. Paul.....		541.97	634.60	618.84		14	⁴ 2
Salt Lake City.....	261.87	412.73	459.32	455.42	74	10	⁴ 1
San Francisco.....	271.48	426.27	458.00	453.30	67	6	⁴ 1
Scranton.....	335.98	603.54	667.48	674.30	95	12	1
Seattle.....	265.35	450.46	472.11	481.55	81	7	2
Springfield.....		585.08	650.44	654.82		12	1
Washington.....	354.82	641.90	708.29	719.22	103	12	2

¹ See note on p. 48.

² Cost of year's supply at prices charged in specified months.

³ Increase of less than five-tenths of 1 per cent.

⁴ Decrease.

⁵ Decrease of less than five-tenths of 1 per cent.

Index Numbers of Wholesale Prices in the United States, 1913 to August, 1919.

WHOLESALE prices in the United States continued to advance during August, the Bureau's weighted index number standing at 226, as compared with 219 for July. The groups of food commodities, cloths and clothing, lumber and building materials, and house-furnishing goods showed large increases, the index numbers rising from 218 to 228, 282 to 303, 186 to 209, and from 245 to 259, respectively. Smaller increases occurred in the fuel and lighting, metals and metal products, chemicals and drugs, and miscellaneous groups. On the other hand, the index number for farm products dropped from 246 to 243.

Among the important commodities whose wholesale prices averaged higher in August than in July were barley, corn, alfalfa hay, hides, cattle, sheep, peanuts, beans, butter, canned goods, eggs, rye flour, fruits, glucose, corn meal, fresh beef, milk, olive oil, rice, potatoes, vinegar, shoes, cotton and woolen goods, leather, anthracite coal, coke, refined petroleum, ingot copper, copper wire, bar silver, window glass, lumber, linseed oil, rosin, glycerin, muriatic acid, wood alcohol, furniture, cutlery, bran, cottonseed meal, jute, soap, and wood pulp. Cotton, oats, wheat, timothy hay, hogs, poultry, cheese, wheat flour, lard, silk, turpentine, lubricating oil, and rope averaged lower in price, while flaxseed, rye, hops, tobacco, bacon, hams, lamb, mutton, salt, sugar, tea, carpets, bituminous coal, gasoline, matches, crude petroleum, bar iron, pig iron, steel and steel products, brick, and cement remained practically unchanged in price.

In the period from August, 1918, to August, 1919, the index number of farm products increased from 230 to 243, that of food articles from 193 to 228, and that of cloths and clothing from 252 to 303. During the same period the index number of fuel and lighting increased from 166 to 175, that of lumber and building materials from 157 to 209, and that of house-furnishing goods from 221 to 259. The index number of miscellaneous commodities, including such important articles as cottonseed meal, jute, malt, lubricating oil, news-print paper, rubber, rope, starch, soap, plug tobacco, and wood pulp, increased from 191 to 225. In the groups of metals and metal products and chemicals and drugs, the index number decreased from 185 to 161 and from 222 to 172, respectively, from August, 1918, to August, 1919.

INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED MONTHS, 1913, TO AUGUST, 1919, BY GROUPS OF COMMODITIES.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House furnishing goods.	Miscellaneous.	All commodities.
1913.										
Average for year...	100	100	100	100	100	100	100	100	100	100
January.....	97	99	100	103	107	100	101	100	100	100
April.....	97	96	100	98	102	101	101	100	98	98
July.....	101	102	100	99	98	101	99	100	101	100
October.....	103	102	100	100	99	98	100	100	100	101
1914.										
January.....	101	102	98	99	92	98	100	99	99	100
April.....	103	95	99	98	91	99	100	99	101	98
July.....	104	104	99	95	85	97	99	99	97	100
October.....	103	107	97	93	83	96	105	99	96	99
1915.										
January.....	102	106	96	93	83	94	103	99	100	99
April.....	107	105	99	89	91	94	102	99	99	100
July.....	108	105	99	90	102	93	108	99	98	101
October.....	105	104	103	96	100	93	124	99	99	102
1916.										
January.....	108	114	110	105	126	99	150	105	107	111
April.....	114	118	119	108	147	102	172	108	110	117
July.....	118	122	126	108	145	99	156	121	120	120
October.....	136	141	138	133	151	101	150	124	132	134
1917.										
January.....	148	151	161	176	183	106	159	132	138	151
February.....	151	160	162	185	190	108	160	132	141	156
March.....	163	161	164	188	199	110	165	132	143	161
April.....	181	183	169	184	208	114	170	139	149	173
May.....	197	192	173	194	217	117	179	139	150	182
June.....	197	188	179	201	239	127	180	144	152	185
July.....	199	182	187	192	257	132	198	152	153	187
August.....	205	181	193	165	249	133	209	152	156	186
September.....	204	180	193	160	226	134	223	152	155	183
October.....	208	184	193	146	182	134	252	152	163	181
November.....	212	185	198	155	174	134	240	155	166	183
December.....	205	186	202	158	174	135	238	155	170	183
1918.										
January.....	207	188	211	157	174	136	232	161	178	185
February.....	208	187	216	157	176	138	232	161	181	187
March.....	212	179	223	158	176	144	232	165	184	187
April.....	217	180	232	157	177	146	229	172	191	190
May.....	214	179	237	160	178	148	223	173	194	191
June.....	217	180	245	159	178	150	219	198	196	193
July.....	224	186	249	166	184	154	216	199	190	198
August.....	230	193	252	166	185	157	222	221	191	203
September.....	237	200	254	167	184	159	220	226	194	207
October.....	224	202	256	167	187	158	218	226	196	205
November.....	221	208	255	171	188	164	215	226	203	206
December.....	222	212	250	171	184	164	195	227	204	207
1919.										
January.....	222	209	234	170	172	161	191	218	212	203
February.....	218	197	223	169	168	163	185	218	208	197
March.....	228	205	216	168	162	165	183	218	217	201
April.....	235	212	217	167	152	162	178	217	216	203
May.....	240	216	227	167	152	164	179	217	213	207
June.....	231	206	258	170	154	175	174	233	212	207
July.....	246	218	282	171	158	186	171	245	221	219
August ¹	243	228	303	175	161	209	172	259	225	226

¹ Preliminary.

Gross Margin of Profit in Retail Sales of Food in the District of Columbia.

TWO tables relating to the gross margin of profit in the retail sale of food in the District of Columbia are here presented.

The first table relates to the margin in the sale of fresh beef. Retail price figures were obtained from six meat dealers. Each dealer gave the weight and wholesale price of a side of beef, and then gave the weight of each of the several cuts from the side with the retail price of each cut. It should be stated that in this table the number of pounds of each kind of meat represents, in most cases, sales to several customers. Following this tabulation, summary figures are shown for the six firms.

The second table shows the gross margin of profit on the principal articles of food sold in grocery stores. Each grouping of three lines refers to a particular article in a particular store. The first line shows the wholesale price, the second line the retail price, and the third line the difference between the two prices, in other words, the gross margin of the dealer. The retail price is for a day in the first week of September, 1919.

For a number of articles, two columns of prices are presented in Table 2. The first column shows the actual wholesale cost of the article that was being sold by the retailer, that is, what the retailer actually paid for the article. The article might have been bought by the retailer only a day or two before the retail sale, or it might have been bought months earlier. In a number of instances, the month in which the wholesale purchase was made is stated in the table. The second column shows the wholesale market price of the article at the time of the retail sale, in other words it is the price the dealer would have had to pay to replace the article the day the retail sale was made. In a number of instances, the current wholesale market price is the same as the cost, no change having taken place in the wholesale price between the date the article was bought at wholesale and the date of its sale at retail. In some instances the wholesale price advanced between the date of purchase and the date of sale, and in some instances, the wholesale price declined.

The method of fixing the retail price differs as between dealers, and as between different articles with the same dealer. One dealer determines his gross margin of profit at the time of his purchase, and holds to that margin if he can, which is easy enough if the wholesale price continues to advance, but difficult if the wholesale price goes down, as then he must meet the competition of the dealer who has just bought at a lower wholesale price. Other dealers change

their retail price according to the wholesale market with only a secondary regard as to their purchase price.

The gross margin must not be considered as clear profit, for out of it must come the cost of doing business. The gross margin must first provide for interest on capital invested, rent, clerk hire, delivery, light, heat, ice, taxes, bad debts, depreciated and spoiled food, etc. No attempt is here made to ascertain the dealer's net profit.

Wholesale meat dealers sell meat by the carcass, side, or quarter, and also subdivide a quarter and sell it out in smaller subdivisions known in the trade as "cuts."

TABLE 1.—WHOLESALE AND RETAIL PRICES OF FRESH BEEF, AND GROSS MARGIN.

Cuts of meat.	Firm No. 1.			Firm No. 2.			Firm No. 3.			Firm No. 4.			Firm No. 5.			Firm No. 6.		
	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.
Purchase by retailer from wholesaler of side of beef.....	240	Cents. 22	\$52.80	246	Cents. 21	\$51.66	248	Cents. 23	\$57.04	264	Cents. 20	\$52.80	200	Cents. 12.5	\$25.00	250	Cents. 15	\$37.50
SALES BY RETAILER TO CUSTOMERS.																		
Hindquarter.....	115			120			121			127			92			121		
Round of beef:																		
Rump—																		
Roast.....	7½	25	1.88	5	35	1.75	11	35	3.85	9½	30	2.85	10	23	2.30	11	28	3.08
Bone	5	40	2.00	8	40	3.20				2½		.01	1½		.01	3½		.01
Shank—	2½		.01	3			4		.02									
Meat.....	2	25	.50	7	25	1.75	3	25	.75	5	25	1.25	3½	20	.70	2½	20	.50
Bone	13		.75	9		.06	12		.55	10		.05	6		.03	10		.05
Round steak.....	25	45	11.25	28	45	12.60	31	45	13.95	33	40	13.20	25	28	7.00	38	35	13.30
Loin of beef:																		
Loin steak.....	6	50	3.00	27	50	13.50	23	50	11.50	30	45	13.50	23	28	6.44	27½	38	10.45
Porterhouse steak.....	10	55	5.50															
Fat	3	55	1.65	14	55	7.70	19	50	9.50	17½	45	7.88	7½	28	2.10	12	40	4.80
Flank:	14	60	8.40															
Steak.....	1½	40	.60	1	43	.43				1½	35	.53				1½	25	.31
Meat.....	11½	25	2.88	3	20	.60	11	12½	1.38	4	20	.80	10	20	2.00	4½	20	.95
Fat				4	3	.12				4	8	.32	2	6	.12	2	10	.20
Kidney:																		
Kidney fat.....	11		.50	14½		.60	7		.70	4	8	.32	24	10	.25	2½	10	.25
Kidney.....	1	25	.25	6½		.03				1	25	.25	1	20	.20	1	20	.20
Trimnings—bone and fat.....										5		.03				5		.05
Loss in cutting and weighing.....	2																	
Forequarter.....	125			126			127			137			108			129		
Chuck:																		
Shoulder.....	30	33	9.90	38½	35	13.48				135	30	10.50	18	19	3.42	22½	22	4.95
Neck.....	18	25	4.50	10	30	3.00	24½	30	13.65	17	25	4.25	15	15	2.25	5½	20	1.10
Neck bone.....	7		.04	2½		.01	3		.01			.01				3		.01
Plate.....	33	15	4.95	32	20	6.40	35½	20	7.10	37½	18	6.75	30	12	3.60	30	15	4.50
																5½	20	1.05

¹ Includes top rib.

TABLE 1.—WHOLESALE AND RETAIL PRICES OF FRESH BEEF, AND GROSS MARGIN—Concluded.

Cuts of meat.	Firm No. 1.			Firm No. 2.			Firm No. 3.			Firm No. 4.			Firm No. 5.			Firm No. 6.		
	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.	Num- ber of pounds.	Price per pound.	Cost.
	125	Cents.		126	Cents.		137	Cents.		137	Cents.		108	Cents.		139	Cents.	
Forequarter—Concluded.....																		
Ribs of beef:																		
Rib roast—																		
Six ribs.....	14	45	\$6.30	18	45	\$8.10	117	40	\$6.80	23	30	\$6.90	20	23	\$4.60	134	30	\$4.05
Two ribs.....	8	35	2.80	7	30	2.10	314½	35	5.08				54			7	25	1.75
Shank—																		
Meat.....	8		.40	34	30	1.05	11		1.25	7	25	1.75	34	20	.70	24	20	.50
Bone.....				94		.50				7		.04	54		.03	64		.03
Clod.....				5	40	2.00	3½	35	1.23	5	30	1.50	71	23	1.73	104	28	3.01
Top rib.....	(4)	35	2.45										8½	23	1.96	151	28	4.27
Trimming—bone and fat.....																53		.02
Loss in cutting and weighing.....										2½						64	20	.80
Total selling price.....			70.51			78.99			77.31			72.69			39.44			60.19
Average selling price..... per pound.		29.4			32.1			31.1	\$20.27		27.5		19.7		\$14.44		24.1	\$22.69
Gross margin..... per pound.		7.4	\$17.71		11.1			8.1			7.5		7.2				9.1	
Per cent of gross margin.....									36			38			58			61
Credit from wholesaler.....			7 Yes.		53	7 Yes.		7 Yes.	7 Yes.			7 Yes.			Yes.			7 Yes.
Trimming before or after weighing.....			(4)		(4)	(4)		(4)	(4)			(4)			(4)			(10)
Credit to customer.....			11 Yes.		Yes.	Yes.		Yes.	Yes.			No.			No.			No.
Wholesaler delivers to retailer.....			12 Yes.		12 Yes.	12 Yes.		12 Yes.	12 Yes.			12 Yes.			12 Yes.			12 Yes.
Retailer delivers to customer.....			No.		Yes.	Yes.			Yes.			No.			No.			No.

15 ribs.
17 ribs.
4 ribs.

4 Included in shoulder chuck.
5 Bone.
6 Meat.

7 For 1 week only.
8 Steaks before weighing, other cuts after.
9 Does not trim before or after.

10 All cuts before except rib of beef.
11 A few regular customers.
12 If desired.

Total and average for the 6 firms shown above.

Total weight.....	pounds.....	1,448
Total cost.....	\$276.80	
Average cost per pound.....	cents.....	19.1
Total selling price.....	\$399.13	
Gross margin.....	\$122.33	
Average selling price per pound.....	cents.....	27.6
Average gross margin per pound.....	do.....	8.5
Per cent of gross margin.....		44

The Washington branch of one of the large packing companies was visited for the purpose of checking wholesale prices of beef by the side and of getting wholesale prices of standard cuts of beef. A half carcass, consisting of one hindquarter and one forequarter, together weighing 232 pounds, and having a selling price of 18 cents a pound by the side, was selected for a test. The following table shows the weight of the hindquarter and forequarter of this side of beef. It also shows the weight and the wholesale price of the two cuts of the hindquarter and of the five cuts of the forequarter. At the bottom of the table is a total of the wholesale selling prices as the half carcass was sold out in seven parts. The average price received for the seven cuts was 19.2 cents per pound, or 1.2 cents per pound more than would have been received had the side been sold as a whole.

Wholesale price if sold by the side—

Side, 232 pounds, at 18 cents	\$41.76
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Wholesale prices when sold by the piece—

Hindquarter, 110 pounds:

Loin, 53 pounds, at 28 cents	14.84
Round, 57 pounds, at 22 cents	12.54

Forequarter, 122 pounds:

Ribs, 22 pounds, at 25 cents	5.50
Chuck, 44 pounds, at 14 cents	6.16
Brisket, 15 pounds, at 10 cents	1.50
Navel, 20 pounds, at 10 cents	2.00
Shank, 20 pounds, at 10 cents	2.00
Loss, 1 pound in cutting	

Total wholesale selling price as sold by the cut.....	44.54
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Average price per pound received for the seven cuts (cents).....	19.2
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TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Apples, cooking:			
Wholesale, from farmer; cash and no delivery.....	Peck.....	¹ \$0.563	\$0.563
Retail, cash or credit and delivery.....	do.....	.800	.800
Gross margin.....	do.....	.237	.237
Wholesale, from farmer; cash and no delivery.....	do.....	¹ .600	.600
Retail, cash or credit and delivery.....	do.....	.920	.920
Gross margin.....	do.....	.320	.320
Wholesale, credit and no delivery.....	do.....	.500	.500
Retail, cash and no delivery.....	do.....	.600	.600
Gross margin.....	do.....	.100	.100
Beans, baked:			
Wholesale, cash and delivery.....	20-ounce can..	.146	
Retail, cash or credit and delivery.....	do.....	.180	
Gross margin.....	do.....	.034	
Wholesale, cash and delivery.....	do.....	.104	
Retail, cash or credit and delivery.....	do.....	.125	
Gross margin.....	do.....	.021	
Wholesale, cash and no delivery.....	18-ounce can..	.121	
Retail, cash and no delivery.....	do.....	.130	
Gross margin.....	do.....	.009	
Wholesale, credit and no delivery.....	17-ounce can..	.103	.103
Retail, cash and no delivery.....	do.....	.125	.125
Gross margin.....	do.....	.022	.022
Wholesale, credit and delivery.....	18-ounce can..	² .103	.113
Retail, credit and delivery.....	do.....	.170	.170
Gross margin.....	do.....	.067	.057
Wholesale, credit and delivery.....	do.....		.113
Retail, credit and delivery.....	do.....		.150
Gross margin.....	do.....		.037
Wholesale credit and delivery.....	do.....	² .162	.125
Retail credit and delivery.....	do.....	.200	.200
Gross margin.....	do.....	.038	.075
Wholesale, credit and delivery.....	do.....		.113
Retail, cash and no delivery.....	do.....		.180
Gross margin.....	do.....		.067
Wholesale, credit and delivery.....	do.....		.113
Retail, no credit and no delivery.....	do.....		.120
Gross margin.....	do.....		.007
Beans, navy, white, dried:			
Wholesale, credit and delivery.....	Pound.....	.100	.093
Retail, credit and delivery.....	do.....	.120	.120
Gross margin.....	do.....	.020	.027
Wholesale, credit and delivery.....	do.....		.093
Retail, cash and no delivery.....	do.....		.120
Gross margin.....	do.....		.027
Wholesale, credit and delivery.....	do.....		.093
Retail, credit and delivery.....	do.....		.140
Gross margin.....	do.....		.047
Wholesale.....	do.....	⁴ .100	
Retail, cash or credit and delivery.....	do.....	.125	
Gross margin.....	do.....	.025	
Wholesale, cash and no delivery.....	do.....	.083	
Retail, cash and no delivery.....	do.....	.100	
Gross margin.....	do.....	.017	
Wholesale, credit and no delivery.....	do.....	.098	.098
Retail, cash and no delivery.....	do.....	.120	.120
Gross margin.....	do.....	.022	.022

¹ September, 1919.² August, 1919.³ March, 1919.⁴ Fall, 1918.

TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN—Continued.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Beans, string:			
Wholesale, from farmer, cash and no delivery.....	Peck.....	¹ \$0.250	\$0.250
Retail, cash or credit and delivery.....	do.....	.400	.400
Gross margin.....	do.....	.150	.150
Wholesale, from farmer cash and no delivery.....	do.....	¹ .250	.250
Retail, cash or credit and delivery.....	do.....	.400	.400
Gross margin.....	do.....	.150	.150
Wholesale, credit and no delivery.....	do.....	¹ .250	.250
Retail, cash and no delivery.....	do.....	.350	.350
Gross margin.....	do.....	.100	.100
Bread, wheat:			
Wholesale, cash and delivery.....	Loaf.....	¹ .070	.....
Retail, cash or credit and delivery.....	do.....	.080	.....
Gross margin.....	do.....	.010	.....
Wholesale, credit and no delivery.....	12-ounce loaf.....	¹ .063	.063
Retail, cash and no delivery.....	do.....	.070	.070
Gross margin.....	do.....	.007	.007
Wholesale, cash and delivery.....	Loaf.....	¹ .070	.....
Retail, cash or credit and delivery.....	do.....	.080	.....
Gross margin.....	do.....	.010	.....
Wholesale, cash and no delivery.....	12-ounce loaf.....	¹ .070	.....
Retail, cash and no delivery.....	do.....	.080	.....
Gross margin.....	do.....	.010	.....
Butter, creamery:			
Wholesale, cash and delivery.....	Pound.....	¹ .640	.....
Retail, cash or credit and delivery.....	do.....	.710	.....
Gross margin.....	do.....	.070	.....
Wholesale, cash and delivery.....	do.....	¹ .600	.....
Retail, cash or credit and delivery.....	do.....	.690	.....
Gross margin.....	do.....	.090	.....
Wholesale, delivery.....	do.....	¹ .630	.630
Retail, credit and delivery.....	do.....	.750	.750
Gross margin.....	do.....	.120	.120
Wholesale, cash.....	do.....	.630	.....
Retail, cash or credit and delivery.....	do.....	.700	.....
Gross margin.....	do.....	.070	.....
Wholesale, cash and no delivery.....	do.....	.565	.....
Retail, cash and no delivery.....	do.....	.620	.....
Gross margin.....	do.....	.055	.....
Wholesale, credit and no delivery.....	do.....	.560	.570
Retail, cash and no delivery.....	do.....	.650	.650
Gross margin.....	do.....	.090	.080
Cabbage:			
Wholesale, credit and no delivery.....	do.....	.035	.035
Retail, cash and no delivery.....	do.....	.060	.060
Gross margin.....	do.....	.025	.025
Wholesale, from farmer.....	do.....	.040	.040
Retail, cash or credit and delivery.....	do.....	.060	.060
Gross margin.....	do.....	.020	.020
Wholesale, from farmer.....	Head.....	¹ .140	.140
Retail, cash or credit and delivery.....	do.....	.175	.175
Gross margin.....	do.....	.035	.035
Cheese, American:			
Wholesale, cash and no delivery.....	Pound.....	.343	.....
Retail, cash and no delivery.....	do.....	.390	.....
Gross margin.....	do.....	.047	.....
Wholesale.....	do.....	¹ .370	.....
Retail, cash or credit and delivery.....	do.....	.450	.....
Gross margin.....	do.....	.080	.....

¹ September, 1919.² July, 1919.

TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN—Continued.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Cheese, American—Concluded.			
Wholesale, cash and delivery.....	Pound.....	\$0.360	
Retail, cash or credit and delivery.....	do.....	.410	
Gross margin.....	do.....	.050	
Wholesale, credit and no delivery.....	do.....	.320	\$0.330
Retail, cash and no delivery.....	do.....	.400	.400
Gross margin.....	do.....	.080	.070
Coffee:			
Wholesale, credit and no delivery.....	do.....	.340	.375
Retail, cash and no delivery.....	do.....	.440	.440
Gross margin.....	do.....	.100	.065
Wholesale, cash.....	do.....	.440	
Retail, cash or credit and delivery.....	do.....	.480	
Gross margin.....	do.....	.040	
Wholesale, cash and delivery.....	do.....	\$.500	.480
Retail, cash or credit and delivery.....	do.....	.600	.600
Gross margin.....	do.....	.100	.120
Wholesale, cash and no delivery.....	do.....	.373	
Retail, cash and no delivery.....	do.....	.450	
Gross margin.....	do.....	.077	
Wholesale, credit and delivery.....	1-pound can.....		.480
Retail, no credit and no delivery.....	do.....		.550
Gross margin.....	do.....		.070
Wholesale, credit and delivery.....	do.....		.480
Retail, credit and delivery.....	do.....		.650
Gross margin.....	do.....		.170
Wholesale, credit and delivery.....	do.....		.480
Retail, no credit and no delivery.....	do.....		.580
Gross margin.....	do.....		.100
Wholesale, credit and delivery.....	do.....	.500	.480
Retail, credit and delivery.....	do.....	.600	.600
Gross margin.....	do.....	.100	.120
Wholesale, credit and delivery.....	do.....		.480
Retail, cash and no delivery.....	do.....		.550
Gross margin.....	do.....		.070
Wholesale, credit and delivery.....	do.....	\$.450	.480
Retail, credit and delivery.....	do.....	.600	.600
Gross margin.....	do.....	.150	.120
Coffee, concentrated:			
Wholesale, credit and delivery.....	4-oz. package.....		.883
Retail, credit and delivery.....	do.....		1.450
Gross margin.....	do.....		.567
Wholesale, credit and delivery.....	33-dram pkg.....		.279
Retail, credit and delivery.....	do.....		.450
Gross margin.....	do.....		.171
Wholesale, credit and delivery.....	2½-oz. package.....		.560
Retail, credit and delivery.....	do.....		.750
Gross margin.....	do.....		.187
Corn, green:			
Wholesale, credit and no delivery.....	Dozen.....	.350	.350
Retail, cash and no delivery.....	do.....	.500	.500
Gross margin.....	do.....	.150	.150
From farmer, wholesale.....	do.....	.350	.350
Retail, cash or credit and delivery.....	do.....	.500	.500
Gross margin.....	do.....	.150	.150
From farmer, wholesale.....	do.....	\$.300	.300
Retail, cash or credit and delivery.....	do.....	.400	.400
Gross margin.....	do.....	.100	.100

¹ August, 1919.

² September, 1919.

TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN—Continued.

Article.	Unit	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Corn, canned:			
Wholesale, credit and delivery.....	20-oz. can.....		\$0.133
Retail, no credit and no delivery.....	do.....		.125
Gross margin.....	do.....		1.008
Wholesale, credit and no delivery.....	do.....	\$0.133	.120
Retail, cash and no delivery.....	do.....	.150	.150
Gross margin.....	do.....	.017	.030
Wholesale, cash and delivery.....	do.....	.167	.167
Retail, cash or credit and delivery.....	do.....	.200	.200
Gross margin.....	do.....	.033	.033
Wholesale, cash and delivery.....	do.....	2.188	.190
Retail, cash or credit and delivery.....	do.....	.230	.230
Gross margin.....	do.....	.042	.040
Corn flakes:			
Wholesale, credit and no delivery.....	Package.....	.083	.088
Retail, cash and no delivery.....	do.....	.090	.090
Gross margin.....	do.....	.007	.002
Wholesale, credit and delivery.....	8-oz. package.....	2.120	.117
Retail, credit and delivery.....	do.....	.150	.150
Gross margin.....	do.....	.030	.033
Wholesale, credit and delivery.....	do.....	2.120	.117
Retail, credit and delivery.....	do.....	.150	.150
Gross margin.....	do.....	.030	.033
Wholesale, credit and delivery.....	do.....		.117
Retail, cash and no delivery.....	do.....		.120
Gross margin.....	do.....		.003
Wholesale, cash and delivery.....	Package.....	2.103	.108
Retail, cash or credit and delivery.....	do.....	.130	.130
Gross margin.....	do.....	.027	.022
Wholesale, cash and no delivery.....	do.....	.098	
Retail, cash and no delivery.....	do.....	.120	
Gross margin.....	do.....	.022	
Wholesale, credit and delivery.....	8-oz. package.....	4.115	.114
Retail, credit and delivery.....	do.....	.150	.150
Gross margin.....	do.....	.035	.036
Wholesale, cash and delivery.....	Package.....	.108	.113
Retail, cash or credit and delivery.....	do.....	.130	.130
Gross margin.....	do.....	.022	.017
Crisco:			
Wholesale, cash and no delivery.....	Pound.....	.346	
Retail, cash and no delivery.....	do.....	.380	
Gross margin.....	do.....	.034	
Wholesale, cash and delivery.....	do.....	2.367	.319
Retail, cash or credit and delivery.....	do.....	.400	.400
Gross margin.....	do.....	.033	.081
Wholesale, credit and no delivery.....	do.....	.320	.360
Retail, cash and no delivery.....	do.....	.380	.380
Gross margin.....	do.....	.060	.020
Wholesale, cash and delivery.....	do.....	.385	.385
Retail, cash or credit and delivery.....	do.....	.400	.400
Gross margin.....	do.....	.015	.015
Wholesale, credit and delivery.....	1-pound can.....	5.438	.372
Retail, credit and delivery.....	do.....	.450	.450
Gross margin.....	do.....	.012	.078
Wholesale, credit and delivery.....	do.....		.372
Retail, cash and no delivery.....	do.....		.430
Gross margin.....	do.....		.058

¹ Loss.² July, 1919.³ August, 1919.⁴ September, 1919.⁵ May, 1919.

TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN—Continued.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Crisco—Concluded.			
Wholesale, credit and delivery.....	1-pound can.....		\$0.372
Retail, credit and delivery.....	do.....		.420
Gross margin.....	do.....		.048
Wholesale, credit and delivery.....	do.....		.372
Retail, credit and delivery.....	do.....		.400
Gross margin.....	do.....		.028
Wholesale, credit and delivery.....	do.....		.372
Retail, no credit and no delivery.....	do.....		.380
Gross margin.....	do.....		.008
Wholesale (in 6-pound cans), credit and delivery.....	Pound.....		.369
Retail, credit and delivery.....	do.....		.450
Gross margin.....	do.....		.081
Eggs:			
Strictly fresh—			
Wholesale, cash and no delivery.....	Dozen.....	¹ \$0.470	
Retail, cash and no delivery.....	do.....	.530	
Gross margin.....	do.....	.060	
Strictly fresh, nearby—			
Wholesale.....	do.....	1.550	
Retail, cash or credit and delivery.....	do.....	.610	
Gross margin.....	do.....	.060	
Strictly fresh (selected), nearby—			
Wholesale.....	do.....	1.570	
Retail, cash or credit and delivery.....	do.....	.600	
Gross margin.....	do.....	.030	
Strictly fresh, guaranteed—			
Wholesale.....	do.....	1.650	
Retail.....	do.....	.800	
Gross margin.....	do.....	.150	
Storage—			
Wholesale, credit and no delivery.....	do.....	.470	.470
Retail, cash and no delivery.....	do.....	.550	.550
Gross margin.....	do.....	.080	.080
Flour, wheat:			
Wholesale, cash and no delivery.....	24½-pound bag.....	1.594	
Retail, cash and no delivery.....	do.....	1.750	
Gross margin.....	do.....	.156	
Wholesale, cash and delivery.....	12-pound bag..	.813	
Retail, cash or credit and delivery.....	do.....	.900	
Gross margin.....	do.....	.087	
Wholesale, credit and no delivery.....	24-pound bag..	1.450	1.450
Retail, cash and no delivery.....	do.....	1.650	1.650
Gross margin.....	do.....	.200	.200
Wholesale.....	24½-pound bag.....	1.450	
Retail, cash or credit and delivery.....	do.....	1.900	
Gross margin.....	do.....	.450	
Wholesale, credit and delivery.....	24½-pound bag.....	² 1.563	1.525
Retail, credit and delivery.....	do.....	1.950	1.950
Gross margin.....	do.....	.387	.425
Wholesale, credit and delivery.....	49-pound bag..	³ 3.300	3.338
Retail, credit and delivery.....	do.....	3.750	3.750
Gross margin.....	do.....	.450	.412
Wholesale, credit and delivery.....	do.....	² 3.125	3.025
Retail, credit and delivery.....	do.....	3.750	3.750
Gross margin.....	do.....	.625	.725
Wholesale, credit and delivery.....	6-pound bag... ²	.436	.441
Retail, credit and delivery.....	do.....	.550	.550
Gross margin.....	do.....	.114	.109
Wholesale, credit and delivery.....	do.....	² .391	.391
Retail, credit and delivery.....	do.....	.550	.550
Gross margin.....	do.....	.159	.159

¹ September, 1919.² August, 1919.³ July, 1919.

TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN—Continued.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Flour, wheat—Concluded.			
Wholesale, credit and delivery.....	6-pound bag ..		\$0.391
Retail, cash and no delivery.....	do.....		.500
Gross margin.....	do.....		.109
Wholesale, credit and delivery.....	2-pound bag.....		.126
Retail, cash and no delivery.....	do.....		.160
Gross margin.....	do.....		.034
Wholesale, credit and delivery.....	12-pound bag..	¹ \$0.828	.838
Retail, credit and delivery.....	do.....	1.000	1.000
Gross margin.....	do.....	.172	.162
Wholesale, credit and delivery.....	do.....	² .781	.759
Retail, credit and delivery.....	do.....	1.000	1.000
Gross margin.....	do.....	.219	.241
Wholesale, credit and delivery.....	24½-pound bag..	³ 1.650	1.681
Retail, credit and delivery.....	do.....	1.950	1.950
Gross margin.....	do.....	.300	.269
Lard:			
Wholesale, cash and no delivery.....	Pound.....	.318	
Retail, cash and no delivery.....	do.....	.350	
Gross margin.....	do.....	.032	
Wholesale.....	do.....	¹ .360	.340
Retail, cash or credit and delivery.....	do.....	² .440	.440
Gross margin.....	do.....	.080	.100
Wholesale, cash and delivery.....	do.....	.380	.340
Retail, cash or credit and delivery.....	do.....	.400	.400
Gross margin.....	do.....	.020	.060
Wholesale, credit and no delivery.....	do.....	.310	.310
Retail, cash and no delivery.....	do.....	.350	.350
Gross margin.....	do.....	.040	.040
Milk, evaporated, unsweetened:			
Wholesale, credit and delivery.....	6-ounce can..	² .073	.073
Retail, credit and delivery.....	do.....	.090	.090
Gross margin.....	do.....	.017	.017
Wholesale, credit and delivery.....	1-pound can..	² .145	.132
Retail, credit and delivery.....	do.....	.180	.180
Gross margin.....	do.....	.035	.048
Wholesale, credit and delivery.....	do.....	² .145	.139
Retail, credit and delivery.....	do.....	.180	.180
Gross margin.....	do.....	.035	.041
Wholesale, credit and delivery.....	do.....	² .145	.139
Retail, credit and delivery.....	do.....	.180	.180
Gross margin.....	do.....	.035	.041
Wholesale credit and delivery.....	6-ounce can..	² .073	.063
Retail, credit and delivery.....	do.....	.090	.090
Gross margin.....	do.....	.017	.027
Wholesale, credit and delivery.....	do.....	² .070	.060
Retail, credit and delivery.....	do.....	.090	.090
Gross margin.....	do.....	.020	.030
Wholesale, credit and delivery.....	1-pound can..	² .140	.132
Retail, credit and delivery.....	do.....	.180	.180
Gross margin.....	do.....	.040	.048
Wholesale, credit and delivery.....	6-ounce can..		.073
Retail, credit and delivery.....	do.....		.080
Gross margin.....	do.....		.007
Wholesale, credit and delivery.....	do.....		.063
Retail, credit and delivery.....	do.....		.080
Gross margin.....	do.....		.017

¹ September, 1919.² July, 1919.³ August, 1919.

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TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN—Continued.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Milk, evaporated, unsweetened—Continued.			
Wholesale, credit and delivery.....	1-pound can.....		\$0.139
Retail, cash and no delivery.....	do.....		.170
Gross margin.....	do.....		.031
Wholesale, credit and delivery.....	do.....		.139
Retail, cash and no delivery.....	do.....		.140
Gross margin.....	do.....		.001
Wholesale, credit and delivery.....	do.....		.132
Retail, credit and delivery.....	do.....		.180
Gross margin.....	do.....		.048
Wholesale, credit and delivery.....	do.....		.139
Retail, credit and delivery.....	do.....		.180
Gross margin.....	do.....		.041
Wholesale, cash and no delivery.....	do.....	\$0.134	
Retail, cash and no delivery.....	do.....	.150	
Gross margin.....	do.....	.016	
Wholesale, cash and delivery.....	do.....	.142	.128
Retail, cash or credit and delivery.....	do.....	.140	.140
Gross margin.....	do.....	1.002	.012
Wholesale, credit and no delivery.....	do.....	.125	.141
Retail, cash and no delivery.....	do.....	.150	.150
Gross margin.....	do.....	.025	.009
Wholesale, cash and delivery.....	do.....	.152	
Retail, cash and delivery.....	do.....	.150	
Gross margin.....	do.....	1.002	
Milk, fresh:			
Not skimmed—			
Wholesale, cash and delivery.....	Quart.....	.130	
Retail, cash or credit and delivery.....	do.....	.150	
Gross margin.....	do.....	.020	
Pasteurized—			
Wholesale, delivery.....	Pint.....	² .070	.070
Retail, credit and delivery.....	do.....	.090	.090
Gross margin.....	do.....	.020	.020
Wholesale, delivery.....	Quart.....	² .130	.130
Retail, credit and delivery.....	do.....	.170	.170
Gross margin.....	do.....	.040	.040
Oleomargarine, uncolored:			
Wholesale, credit and no delivery.....	Pound.....	.345	.345
Retail, cash and no delivery.....	do.....	.400	.400
Gross margin.....	do.....	.055	.055
Wholesale, cash and no delivery.....	do.....	.335	
Retail, cash and no delivery.....	do.....	.380	
Gross margin.....	do.....	.045	
Peaches:			
Wholesale, credit and no delivery.....	Peck.....	1.000	1.000
Retail, cash and no delivery.....	do.....	1.250	1.250
Gross margin.....	do.....	.250	.250
Peas, canned:			
Wholesale, cash and delivery.....	20-ounce can..	.196	.196
Retail, cash or credit and delivery.....	do.....	.250	.250
Gross margin.....	do.....	.054	.054
Wholesale, cash and no delivery.....	do.....	.109	
Retail, cash and no delivery.....	do.....	.135	
Gross margin.....	do.....	.026	
Wholesale, credit and no delivery.....	do.....	.133	.125
Retail, cash and no delivery.....	do.....	.150	.150
Gross margin.....	do.....	.017	.025
Wholesale, cash and delivery.....	do.....	.150	
Retail, cash or credit and delivery.....	do.....	.180	
Gross margin.....	do.....	.030	

¹ Loss.² September, 1919.

TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN—Continued.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Peas, canned—Concluded.			
Wholesale, credit and delivery	20-ounce can	\$0.221	\$0.200
Retail, credit and delivery	do.	.250	.250
Gross margin	do.	.029	.050
Wholesale, credit and delivery	do.	2.158	.129
Retail, credit and delivery	do.	.180	.180
Gross margin	do.	.022	.051
Wholesale, credit and delivery	do.	2.192	.179
Retail, credit and delivery	do.	.250	.250
Gross margin	do.	.058	.071
Pork, salt:			
Bacon—			
Wholesale, cash and delivery	Pound	3.450	.420
Retail, cash or credit and delivery	do.	.539	.539
Gross margin	do.	.089	.119
Wholesale, cash and delivery	do.	.420	.420
Retail, cash or credit and delivery	do.	.520	.520
Gross margin	do.	.100	.100
Potatoes, Irish:			
Wholesale, from farmer	Peck	.600	
Retail, cash or credit	do.	.680	
Gross margin	do.	.080	
Wholesale, cash and delivery	do.	.595	.550
Retail, cash or credit and delivery	do.	.750	.750
Gross margin	do.	.155	.200
Wholesale, credit and no delivery	do.	.425	.425
Retail, cash and no delivery	do.	.500	.500
Gross margin	do.	.075	.075
Wholesale, cash and no delivery	do.	.400	
Retail, cash and no delivery	do.	.500	
Gross margin	do.	.100	
Rolled oats:			
Wholesale, credit and delivery	20-oz. package	4.100	.117
Retail, credit and delivery	do.	.130	.130
Gross margin	do.	.030	.013
Wholesale, cash and delivery	Package	.117	.117
Retail, cash or credit and delivery	do.	.120	.120
Gross margin	do.	.003	.003
Wholesale	do.	.096	.108
Retail, cash or credit and delivery	do.	.120	.120
Gross margin	do.	.024	.012
Salmon:			
Wholesale, credit and no delivery	Can	.229	.292
Retail, cash and no delivery	do.	.300	.300
Gross margin	do.	.071	.008
Wholesale, credit and delivery	1-pound can	5.238	.250
Retail, credit and delivery	do.	.350	.350
Gross margin	do.	.112	.100
Wholesale, cash and delivery	Can	3.321	
Retail, cash or credit and delivery	do.	.400	
Gross margin	do.	.079	
Wholesale, cash and no delivery	do.	.208	
Retail, no delivery	do.	.250	
Gross margin	do.	.042	
Wholesale, cash and delivery	do.	5.238	.250
Retail, cash or credit and delivery	do.	.280	.280
Gross margin	do.	.042	.030
Sugar, granulated:			
Wholesale, cash and no delivery	Pound	.090	
Retail, cash and no delivery	do.	.100	
Gross margin	do.	.010	

¹ February, 1918.² September, 1918.³ August, 1919.⁴ June, 1919.⁵ October, 1918.⁶ July, 1919.

TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES, AND GROSS MARGIN—Continued.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Sugar, granulated—Concluded.			
Wholesale, cash and delivery.....	Pound.....	1\$0.103	\$0.097
Retail, cash or credit and delivery.....	do.....	.110	.110
Gross margin.....	do.....	.007	.013
Wholesale, cash and delivery.....	do.....	2.099	.094
Retail, cash or credit and delivery.....	do.....	.110	.110
Gross margin.....	do.....	.011	.016
Wholesale, credit and no delivery.....	do.....	.093	.093
Retail, cash and no delivery.....	do.....	.105	.105
Gross margin.....	do.....	.012	.012
Wholesale, credit and delivery.....	do.....	1.095	.095
Retail, credit and delivery.....	do.....	.110	.110
Gross margin.....	do.....	.015	.015
Wholesale, credit and delivery.....	do.....		.095
Retail, credit and delivery.....	do.....		.105
Gross margin.....	do.....		.010
Wholesale, credit and delivery.....	do.....		.095
Retail, cash and no delivery.....	do.....		.105
Gross margin.....	do.....		.010
Wholesale, credit and delivery.....	do.....		.095
Retail, cash and no delivery.....	do.....		.105
Gross margin.....	do.....		.010
Tea:			
Wholesale, cash and no delivery.....	do.....	.435	
Retail, cash and no delivery.....	do.....	.540	
Gross margin.....	do.....	.105	
Wholesale, cash and delivery.....	do.....	3.539	
Retail, cash or credit and delivery.....	do.....	.800	
Gross margin.....	do.....	.261	
Wholesale, credit and no delivery.....	do.....	.560	.560
Retail, cash and no delivery.....	do.....	.750	.750
Gross margin.....	do.....	.190	.190
Wholesale, credit and delivery.....	do.....		.950
Retail, credit and delivery.....	do.....		1.200
Gross margin.....	do.....		.250
Wholesale, credit and delivery.....	1½-oz. package.....		.080
Retail, no credit and no delivery.....	do.....		.100
Gross margin.....	do.....		.020
Wholesale, credit and delivery.....	1½-oz. package.....		.079
Retail, cash and no delivery.....	do.....		.100
Gross margin.....	do.....		.021
Wholesale, credit and delivery.....	½-lb. package.....	2.300	300
Retail, cash and no delivery.....	do.....	.400	400
Gross margin.....	do.....	.100	100
Wholesale, credit and delivery.....	Per lb. in ½-lb. package.....	2.650	.650
Retail, credit and delivery.....	do.....	.800	.800
Gross margin.....	do.....	.150	.150
Wholesale, credit and delivery.....	do.....	2.600	.600
Retail, credit and delivery.....	do.....	.800	.800
Gross margin.....	do.....	.200	.200
Wholesale, credit and delivery.....	Per lb. in ½-lb. package.....	4.600	.760
Retail, credit and delivery.....	do.....	.920	.920
Gross margin.....	do.....	.320	.160
Wholesale, credit and delivery.....	do.....		.600
Retail, cash and no delivery.....	do.....		.800
Gross margin.....	do.....		.200

¹ July, 1919.² August, 1919.³ September, 1919.⁴ August, 1918.

TABLE 2.—WHOLESALE AND RETAIL PRICES OF GROCERIES AND GROSS MARGIN—Concluded.

Article.	Unit.	Wholesale price at which purchased, retail price, and margin.	Wholesale current market price, retail price, and margin.
Tea—Concluded.			
Wholesale, credit and delivery.....	Pound.....		\$0.710
Retail, credit and delivery.....	do.....		1.000
Gross margin.....	do.....		.290
Wholesale, credit and delivery.....	do.....		.770
Retail, credit and delivery.....	do.....		1.200
Gross margin.....	do.....		.430
Wholesale, credit and delivery.....	do.....		.710
Retail, credit and delivery.....	do.....		1.000
Gross margin.....	do.....		.290
Wholesale, credit and delivery.....	do.....		.730
Retail, credit and delivery.....	do.....		1.100
Gross margin.....	do.....		.370
Wholesale, credit and delivery.....	do.....		.650
Retail, credit and delivery.....	do.....		.900
Gross margin.....	do.....		.250
Tomatoes:			
Canned—			
Wholesale, credit and no delivery.....	32-oz. can.....	\$0.171	.154
Retail, cash and no delivery.....	do.....	.175	.175
Gross margin.....	do.....	.004	.021
Wholesale, cash.....	20-oz. can.....	1.175	
Retail, cash or credit and delivery.....	do.....	.200	
Gross margin.....	do.....	.025	
Wholesale, credit and delivery.....	2-lb. can.....	2.196	.146
Retail, credit and delivery.....	do.....	.200	.200
Gross margin.....	do.....	.004	.054
Wholesale, cash and no delivery.....	20-oz. can.....	.141	
Retail, cash and no delivery.....	do.....	.160	
Gross margin.....	do.....	.019	
Fresh—			
Wholesale, credit and no delivery.....	Pound.....	.060	.080
Retail, cash and no delivery.....	do.....	.110	.110
Gross margin.....	do.....	.030	.030
Wholesale, from farmer.....	Pound.....	.079	.079
Retail, cash or credit and delivery.....	do.....	.100	.100
Gross margin.....	do.....	.021	.022

¹ September, 1918.² October, 1918.

Increase in Rents in Washington, D. C., October, 1914 to August, 1919.

THE Bureau of Labor Statistics has recently completed an investigation of the increase in rents of houses, apartments, and flats in Washington, D. C., from the beginning of the European war in 1914 to the present time. The data were collected by agents of the Bureau in interviews with departmental employees. All the larger departments were visited and a minimum of 100 employees were interviewed in each department. For each employee interviewed a schedule was filled out showing the rent paid in 1919 and for each previous year the tenancy existed back to 1914. In

approximately one-third of the cases the tenancy had continued since 1914.

The following table gives the tabulated results of this investigation, by size of house or apartment.

MONTHLY RENT OF HOUSES, APARTMENTS, AND FLATS, BY SIZE, IN WASHINGTON, D. C., OCTOBER, 1914, TO AUGUST, 1919.

Houses.

Date.	6 room.		7 room.		8 room.		9 room.		Total.
	Num-ber.	Aver-age rent.	Num-ber.	Aver-age rent.	Num-ber.	Aver-age rent.	Num-ber.	Aver-age rent.	
October, 1914.....	30	\$24.16	7	\$25.71	13	\$33.00	8	\$33.44	58
October, 1915.....	35	24.08	8	25.95	13	33.00	10	35.15	66
October, 1916.....	51	24.24	12	29.75	16	32.00	11	35.36	90
October, 1917.....	77	24.35	17	29.09	26	33.37	15	36.67	135
October, 1918.....	93	25.54	21	29.29	30	34.76	19	40.64	163
August, 1919.....	100	27.42	21	29.88	31	37.58	20	45.11	172
Per cent increase:									
1919 over 1914.....	13.49		16.22		13.88		34.90		.....
1919 over 1917.....	12.61		2.72		12.62		23.02		.....

Apartments.

Date.	4 room.		5 room.		6 room.		Total.
	Num-ber.	Aver-age rent.	Num-ber.	Aver-age rent.	Num-ber.	Aver-age rent.	
October, 1914.....	26	\$33.48	19	\$40.32	6	\$41.42	51
October, 1915.....	37	33.70	31	38.69	9	44.72	77
October, 1916.....	47	33.97	47	39.34	10	44.45	104
October, 1917.....	72	33.85	60	39.93	11	44.50	143
October, 1918.....	83	35.12	66	42.03	12	47.67	161
August, 1919.....	92	38.00	74	44.24	15	56.63	181
Per cent increase:							
1919 over 1914.....	13.50		9.72		36.72		.....
1919 over 1917.....	12.26		10.79		27.26		.....

Flats.

Date.	4 room.		5 room.		6 room.		Total.
	Num-ber.	Aver-age rent.	Num-ber.	Aver-age rent.	Num-ber.	Aver-age rent.	
October, 1914.....	9	\$18.06	6	\$27.42	4	\$23.63	19
October, 1915.....	10	17.75	9	26.78	5	23.40	24
October, 1916.....	13	20.58	14	26.18	8	23.19	35
October, 1917.....	16	20.84	19	24.87	12	25.23	47
October, 1918.....	24	26.36	22	27.42	16	26.45	62
August, 1919.....	27	29.83	23	29.29	16	27.14	66
Per cent increase:							
1919 over 1914.....	65.17		6.82		14.85		.....
1919 over 1917.....	43.14		17.77		7.57		.....

MONTHLY RENT OF HOUSES, APARTMENTS, AND FLATS, BY SIZE, IN WASHINGTON,
D. C., OCTOBER, 1914, TO AUGUST, 1919—Concluded.*Summary statement of increase in rents of unfurnished houses, apartments, and flats.*

Per cent of increase 1919 over 1914.				Per cent of increase 1919 over 1917.			
Houses.	Apart- ments.	Flats.	Average per cent of increase.	Houses.	Apart- ments.	Flats.	Average per cent of increase.
15.46	12.29	31.10	16.26	12.60	12.89	22.02	13.32

Comparison of Retail Price Changes in the
United States and Foreign Countries.

THE index numbers of retail prices published by several foreign countries have been brought together with those of this Bureau in the subjoined table after having been reduced to a common base, viz, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers compiled by the Bureau, because of the fact that in some instances satisfactory information for 1913 was not available. For Great Britain, Norway, and Sweden the index numbers are reproduced as published in the original sources, while those for Austria have been rounded off to the nearest whole number from the latest available figures, as published in the British Labor Gazette. All these are shown on the July, 1914, base in the source from which the information is taken. The index numbers here shown for the remaining countries have been obtained by dividing the index for July, 1914, as published, into the index for each month specified in the table. As indicated in the table, some of these index numbers are weighted and some are not, while the number of articles included differs widely. They should not, therefore, be considered as closely comparable one with another. In one or two instances the figures here shown are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities included at successive dates.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND CERTAIN OTHER COUNTRIES.

[July, 1914=100.]

Year and month.	United States: 22 foodstuffs; 45 cities. Weighted.	Australia: 46 foodstuffs; 30 towns. Weighted.	Austria: 18 foodstuffs; Vienna. Weighted.	Canada: 29 foodstuffs; 60 cities. Weighted.	France: 13 articles.	
					Cities over 10,000 popu- lation (except Paris). Weighted.	Paris only. Weighted.
1914.						
July.....	100	100	100	100	¹ 100	100
October.....	103	99	104	108	.....	.....
1915.						
January.....	101	107	121	107	¹ 110	120
April.....	97	113	166	105	.....	114
July.....	98	131	179	105	¹ 123	120
October.....	101	133	217	105	.....	118
1916.						
January.....	105	129	.....	112	¹ 133	134
April.....	107	131	222	112	¹ 137	132
July.....	109	130	.....	114	¹ 141	129
October.....	119	125	.....	125	¹ 146	135
1917.						
January.....	125	125	272	138	¹ 154	139
February.....	130	126	.....	141	.....	.....
March.....	130	126	.....	144	.....	.....
April.....	142	127	275	145	¹ 171	147
May.....	148	127	288	159	.....	.....
June.....	149	127	312	160	.....	.....
July.....	143	126	337	157	¹ 184	183
August.....	146	129	315	157	.....	.....
September.....	150	129	.....	157	.....	.....
October.....	154	129	.....	159	¹ 200	184
November.....	152	129	.....	163	.....	.....
December.....	154	128	.....	165	.....	.....
1918.						
January.....	157	129	.....	167	¹ 211	191
February.....	158	130	.....	169	.....	.....
March.....	151	131	.....	170	.....	.....
April.....	151	131	.....	169	¹ 232	218
May.....	155	132	.....	171	.....	.....
June.....	159	132	.....	172	.....	.....
July.....	164	131	.....	175	¹ 244	206
August.....	168	128	.....	181	.....	.....
September.....	175	128	.....	179	.....	.....
October.....	177	131	.....	182	¹ 260	238
November.....	179	133	.....	182	.....	.....
December.....	183	134	.....	184	.....	.....
1919.						
January.....	181	140	.....	186	¹ 277	248
February.....	169	141	.....	181	.....	227
March.....	172	143	.....	176	.....	248
April.....	178	145	.....	180	¹ 293	257
May.....	181	146	.....	182	.....	268
June.....	180	149	.....	185	.....	264

¹ Quarter beginning that month.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND CERTAIN OTHER COUNTRIES—Concluded.

Year and month.	Great Britain: 21 foodstuffs; 600 towns. Weighted.	Italy: 7 foodstuffs; 40 cities (variable). Not weighted.	Netherlands: 29 articles; 40 cities. Not weighted.	New Zealand: 59 foodstuffs; 25 towns. Weighted.	Norway: 22 foodstuffs (variable); 20 towns (variable). Weighted.	Sweden: 21 articles; 44 towns. Weighted.
1914.						
July.....	100	100	¹ 100	100	100	100
October.....	112	104	¹ 107	102	.....	¹ 107
1915.						
January.....	118	108	114	111	.....	¹ 113
April.....	124	113	123	113	.....	¹ 121
July.....	132 ²	120	131	112	.....	¹ 124
October.....	140	127	128	112	⁴ 129	¹ 128
1916.						
January.....	145	133	135	116	.....	¹ 130
April.....	149	132	142	118	.....	¹ 134
July.....	161	132	150	119	⁵ 161	¹ 142
October.....	168	132	158	120	⁴ 166	¹ 152
1917.						
January.....	187	144	165	127	.....	160
February.....	189	154	165	126	.....	166
March.....	192	161	169	126	183	170
April.....	194	164	170	127	.....	175
May.....	198	167	180	128	197	175
June.....	202	171	184	128	.....	175
July.....	204	172	188	127	.....	177
August.....	202	178	.....	127	214	181
September.....	206	188	.....	129	.....	187
October.....	197	.....	.....	130	.....	192
November.....	206	197	.....	130	230	200
December.....	205	199	.....	132	.....	212
1918.						
January.....	206	191	.....	133	241	221
February.....	208	221	.....	134	.....	227
March.....	207	247	.....	134	253	235
April.....	206	236	.....	137	.....	247
May.....	207	.....	.....	139	264	258
June.....	208	239	.....	139	271	261
July.....	210	253	.....	139	279	268
August.....	218	.....	.....	141	275	280
September.....	216	267	.....	141	270	284
October.....	229	.....	.....	142	276	310
November.....	233	.....	.....	144	275	320
December.....	229	.....	.....	150	275	330
1919.						
January.....	230	.....	.....	145	279	339
February.....	230	.....	.....	142	278	334
March.....	220	.....	.....	141	278	331
April.....	213	281	.....	142	276	336
May.....	207	.....	.....	142	.....	328
June.....	204	.....	.....	143	.....	319

¹ January-July.
² August-December.

³ Quarter beginning that month.
⁴ November.

⁵ August.

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase in the cost of food and general family expenditure for January to August, 1919, over July, 1914. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or frozen; bacon; fish; flour; bread; tea; sugar; milk; butter, fresh and salt; cheese; margarine; eggs; and potatoes.

The table gives percentages of increase, and is not one of relative prices, as is the table given for the United States. When making comparisons, this should be borne in mind, and to obtain the relative price, it is necessary to add 100 to the percentage as given; i. e., January, 1919, the increase is 130, the relative price being 230.

The figures represent two comparisons:¹ First, the increase in price based on the same quantities as used in July, 1914; second, the increase in the cost of living, based on the change in the quality of the standard of living. In other words, the increase in column one of the table shows what the wage earner paid for the same quantities of food, while the figures in column two give the change that results from a substitution of one kind of food for another to meet war-time conditions.

The same method is used in family expenditures, the third column showing percentage of increase of all articles and the last column giving approximate figures, based on the increase in cost of all other articles and the estimated changed consumption of food.

INCREASE IN COST OF FOOD AND ALL ITEMS IN GREAT BRITAIN, AUGUST, 1914, 1915, 1916, 1917, AND 1918, AND JANUARY TO AUGUST, 1919, OVER JULY, 1914.

[Compiled from the British Labour Gazette.]

Month and year.	Food.		All items in family budget.	
	Retail prices (assuming same quantities).	Expenditures (allowing for estimated change in consumption).	Retail prices (assuming same quantities).	Expenditures (allowing for estimated change in consumption).
August, 1914.....	15-16			
August, 1915.....	34			
August, 1916.....	2 60		40-45	
August, 1917.....	102	67	75	
August, 1918.....	118	81	110	85-90
1919.				
January.....	130	79	120	90
February.....	130	77	120	90-95
March.....	120	79	115	90
April.....	113	87	110	95
May.....	107	81	105	90
June.....	104	87	105	95
July.....	109	97	105-110	100
August.....	117	108	115	110

¹ For a more complete explanation, see article by Prof. W. F. Ogburn in the MONTHLY LABOR REVIEW for May, 1919, pp. 169, 170.

² Including tax on sugar and tea.

³ Not including taxes.

⁴ The increase, excluding additional taxation, is 7 per cent less.

⁵ The increase, excluding additional taxation, is 6 per cent less.

Commissions to Fix Retail Prices of Food in France.

THE high prices of all food commodities in France prompted the issuance of a decree on July 31, 1919, by the President, in response to a communication from the Minister of Agriculture and Food Supplies, setting forth the critical situation which has existed and calling attention to the necessity for immediate relief. "Not only has the net cost of articles of consumption been increased by the disturbances which are the consequence of the war, but also a spirit of excessive profiteering has developed among certain middlemen," declares the report, and it is to put an end, if possible, to this taking of "profits out of proportion to those which they should reasonably and morally derive from their business" that the plan to set up in each Department a commission to determine a fixed normal selling price to consumers has been worked out and put into effect by the presidential decree. The recommendations of the Minister of Agriculture and Food Supplies, and the text of the decree issued in pursuance thereof, are given in full as published in the *Journal Officiel* (Paris) for August 1, 1919.

Report of Minister of Agriculture and Food Supplies.

MR. PRESIDENT: The high price of food commodities has reached an excessive rate. Considerations of economic and social order demand that every effort be tried and combined in order to lower, by every means possible, the cost of living.

Without doubt, the increase in production, which will become more intense in proportion as it is removed from the crisis which has convulsed Europe, the betterment of transportation by land and sea, the development of organizations for cooperative consumption and putting them into direct contact with the producers, may tend to reduce the prices prevailing at the present time. But the effects resulting from these causes will only slowly be felt.

To-day we must devise immediate palliatives. Not only has the net cost of commodities of consumption been increased by the disturbances which are the consequence of the war, but also a spirit of excessive profiteering has developed among certain middlemen. Dealers in food commodities have permitted themselves to be carried away in endeavoring to obtain profits out of proportion to those which they should reasonably and morally derive from their business.

Moreover, under cover of the irregularity of the supply of provisions and the trouble occasioned by the war upon trade relations, the middlemen, often strangers to the calling, have increased in overcharging the value of the products with brokerage, burdensome as well as useless.

Honest merchants, who are in the great majority, are interested in being distinguished from those whose regrettable practices are provoking the just protestations of the consumers.

There can be no question of proceeding with a general obligatory fixing of prices for food products; similar measures, which it is moreover very difficult to have observed rigorously by sellers and likewise by buyers, can not be applied out of war time, within a period which is preparing for the return to the normal system of the free play of economic forces.

The provisions which we, therefore, propose have nothing in common with a system for the fixing of prices as it has been understood up to the present time. They do not mean any prejudice to the principle of the freedom of trade and industry dedicated by the constituent assembly as the fundamental law of the country.

The decree proposed has for its aim only the exercising of a moral restraint upon the sellers, permitting purchasers to combat with a thorough knowledge of the subject their exorbitant demands.

To-day, the consumer, not being familiar with the exact elements as to valuation, finds himself disarmed in the presence of the demands of far from scrupulous sellers. Henceforth, he may rely upon authorized valuations in order to defend his rights.

The measures, which are the purport of this decree, will, furthermore, result in awakening the attention of the consumers to the far from scrupulous dealers and to recommend to the clientele those who, contenting themselves with an honest profit, will accept selling at normal prices, officially established.

Finally, the tribunals, in giving their opinions, will find in these official fixings of prices the necessary element of valuation which is not in their possession at the present time.

Such is the purpose of this proposed decree which I have the honor to submit for your signature, if you will have the kindness to give it your approval.

THE MINISTER OF AGRICULTURE AND FOOD SUPPLIES.

Decree by the President of the Republic.

ARTICLE 1. In each Department the service for the fixing of normal prices of food commodities and drinks in common use shall be confided to a commission, whose composition shall be as follows:

1. The director of agricultural service, president.
2. Four representatives of trade, two of whom shall be wholesale merchants or middlemen, and two retailers, designated by the chamber of commerce of the chief city of the Department.
3. Two representatives of agriculture designated by the Departmental agricultural office.
4. Two workmen chosen by the trade-unions.
5. A municipal counsellor of the chief commune of the Department, designated by his colleagues, and a mayor of a rural commune named by the prefect.
6. Two representatives of cooperative societies of consumption, designated by the associations interested.

ART. 2. In the communes with a population greater than 4,000 inhabitants and in the cantons where special economic circumstances justify it, the prefect may institute local commissions composed as hereinabove set forth and presided over by the mayor of the commune interested or of the chief commune of the canton.

ART. 3. In the Department of the Seine there may be instituted several commissions, composed as provided for in article 1 hereof. The presidency of these commissions may be confided, by the prefect of the Seine, to members of the municipal council of Paris or to mayors for the suburban communes.

ART. 4. Each commission shall meet the Saturday of each week and proceed with the determination and revision of normal selling prices to the consumer.

ART. 5. For this determination or revision the commission shall consider the return on the capital invested, of salaries, of the cost of raw materials or of the product according to its rarity more or less great, of the costs of transportation, and of charges of every kind falling upon the farmer, the manufacturer, and the merchant, to which it shall add, as a normal profit, an increase above the cost price, variable according to the commodity, but not exceeding 15 per cent. In the case where local usage or agreements have put in force lower profits the commissions must conform thereto.

The commission may establish different prices for the same merchandise on account of the variation of the elements of the cost price, according to localities.

ART. 6. The special reports of the commission shall confine themselves to quoting, for each commodity or drink, the price recognized as normal. The prices shall be recorded, indicating separately, if there be need, city taxes and other special fiscal charges placed on the merchandise.

ART. 7. The official reports shall receive the widest publicity and shall be printed under the care of the prefect in the form of handbills, which shall be addressed to the mayor of each commune. The mayor shall place them at the disposal of all the merchants and others interested, who, by placing said handbills in a conspicuous position in their stores or salesrooms, shall thus indicate to the consumers that they sell the commodities which compose their commerce at the normal officially posted prices.

ART. 8. The Minister of Agriculture and Food Supplies is charged with the execution of this decree.

Given at Paris, July 31, 1919.

R. POINCARÉ.

Canada's Board of Commerce, and the High Cost of Living.

PURSUANT to a recommendation of the committee appointed to inquire into the high cost of living,¹ the Canadian Parliament, which was prorogued on July 7, 1919, passed an act creating a board of commerce, to consist of three commissioners, each appointed by the Governor in Council for a term of 10 years, their whole time to be devoted to the duties of their office. The board is charged with the general administration of the Combines and Fair Prices Act, 1919, which was enacted to provide machinery for the investigation and restraint of combines, monopolies, trusts, and mergers, and to restrain the enhancement of prices of commodities. The board is not only to hear cases brought before it but is to investigate those which seem to involve an increase in the cost of living. It may also make orders and regulations with respect to any matter dealt with by this act and inquire into any matter referred to it. Appeal may be taken from the board to the Supreme Court upon a question of jurisdiction or of law.

The board is given power to summon and compel the appearance of those who may be considered essential to any investigation it has started, and heavy penalties are provided for non-appearance and refusal to submit to investigation. Investigations by the board apply particularly to mergers, trusts, monopolies, or organizations of any kind which are believed unduly to promote the advantage of manufacturers and dealers at the expense of consumers.

¹ The conclusions reached by this committee, as contained in its final report, appeared in the MONTHLY LABOR REVIEW for September, pp. 113 to 118.

The board has regulative power in connection with discrimination in price between different purchasers of commodities, exclusive purchase or sale agreements, intercorporate shareholding and interlocking directorates and their unfair methods in commerce.

Unreasonable accumulation of the necessities of life is forbidden (necessities being described as food, clothing, and fuel), and excess stocks may be ordered sold. This does not apply to farmers and gardeners.

An unfair price is described as a price which results in the making of unfair profits. In the case of conviction of charging unfair prices or hoarding food, the sale of the food may be ordered. When the board finds that there is a combine for the control of the price or the supply of any article, with undue advantage to the producer and undue expense to the consumer, the custom duty on such article may be reduced or removed to give the public the benefit of reasonable competition. When it is found that there have been unfair profits on the necessities of life, the class of article on which the unfair profits have been taken may be admitted free of duty, or the duty may be reduced.

Disobedience of the board's orders concerning unfair profits is criminal and punishable by a fine of \$1,000 per day.

Increase in Cost of Living in Japan in 1919.

ACCORDING to correspondence from Yokohama to The Economist (London) for August 9, 1919, the average increase in the prices of necessities in 1919 as compared with prewar prices (found by averaging the prices for several years before 1914) was 109 per cent. Figures compiled by the foreign secretaries of the Young Men's Christian Association in Tokio and Yokohama show the following increases in prices of the principal articles of consumption:

Per cent of Increase, 1919 over Prewar Prices.

Milk and butter.....	71
Sugar.....	47
Pork.....	180
Rice.....	178
Beef.....	160
Potatoes.....	150
Fish.....	80
Fowls, eggs, flour, fruit, vegetables, Japanese canned goods, clothing, shoes.....	100
Coal.....	200

Servants' wages increased 60 per cent and jinrikisha fares increased 75 per cent. The accounts of one Tokio family are presented as typical of the actual increase in expenditures for food, fuel, and service during the first four months of 1919 as compared with the first four months of 1916. It is stated that the size of the family was the same in the latter period as during the first four months mentioned and that there was no appreciable difference in the manner of living. In this statement, which also shows the per cent of increase, the conversions from yen into United States money have been made on the basis of 1 yen = 49.85 cents.¹

INCREASE IN COST OF CERTAIN ITEMS IN FAMILY BUDGET IN TOKIO, JAPAN,
JANUARY TO APRIL, 1919, AS COMPARED WITH JANUARY TO APRIL, 1916.

Item.	Jan.-Apr., 1916.	Jan.-Apr., 1919.	Per cent increase.
Groceries.....	\$43.17	\$136.37	215.9
Meat.....	13.43	28.24	110.3
Milk.....	34.70	41.97	21.0
Vegetables.....	6.26	17.11	173.3
Fruit.....	10.20	27.88	173.3
Fuel.....	47.86	106.79	123.1
Service.....	69.79	95.13	36.3
Total.....	225.41	453.49	101.2

¹ See Treasury Department Circular No. 1, Oct. 1, 1919.

WAGES AND HOURS OF LABOR.

Wages and Hours of Labor in the Iron and Steel Industry, 1913, 1914, 1915, 1917, 1919.

IN THE following tables statistics concerning hours and earnings of employees in the iron and steel industry, gathered during the progress of the recent industrial survey, have been brought into comparison with similar figures for earlier years already in the possession of the Bureau. The information concerning the years 1913, 1914, and 1915 was taken from Bulletin No. 218 of the Bureau. It was based on pay-roll material gathered in the field by agents of the Bureau. The figures for 1917 were copied from the MONTHLY REVIEW for March, 1918. They were based on material gathered through the use of questionnaires by the Federal Trade Commission in cooperation with the Bureau. The figures for 1919 are based on material gathered in the field by agents of the Bureau.

Owing to the conditions under which the present survey was carried out it was impossible to obtain data for all establishments for the same month. On the contrary the pay-roll periods extend from June, 1918 (one department of one establishment only), to May, 1919. The distribution of the pay-roll periods by months is as follows: 1918: June, 1; October, 1; November, 1; December, 27; 1919: January, 14; February, 6; March, 17; April, 4; May, 2. It will be seen therefore that the schedules of 64 of the 73 establishments are for pay-roll periods in the months of December to March, inclusive. The material is here tabulated as of the year 1919.

For purposes of tabulation the territory covered in the investigation in this industry has been divided into five districts, with the following boundaries: The eastern district includes establishments in New Jersey and eastern Pennsylvania; the Pittsburgh district covers western Pennsylvania, eastern Ohio, and northern West Virginia; the southern district covers Virginia, Alabama, Kentucky, and Tennessee; the Great Lakes and middle western district covers western New York, Indiana, Illinois, Wisconsin, and Colorado; the Pacific coast district includes California and Washington. Data for the last-named district were obtained in 1919 for the first time. Of the divisions of the industry included in this report only the open-hearth department is found in that district. Although no earlier

material is available for comparison between years in that district, the statistics are given for use in contemporary comparisons between different parts of the country.

Table 1 presents for each occupation in each district separately the average full-time hours per week and the average earnings per hour for all the employees in that occupation in the district. "Full-time hours per week" means the number of hours per week that persons in the occupation in question are expected to work. Where a plant has introduced a basic day for purposes of computing earnings, but regularly operates additional hours either at the same rate or at a higher rate than that paid for the basic time, the full-time hours include not only the basic hours but also the additional hours which the employees are regularly expected to work. Thus in quite a number of occupations with a basic eight-hour day the employees regularly work ten hours a day, the last two hours being paid for at the rate of time and a half. While the ninth and tenth hours of the day are overtime for the purpose of computing earnings, they have been treated in this computation as a part of the full-time hours of the occupation.

Hourly earnings are obtained by dividing the entire remuneration received by an employee for a pay-roll period by the number of hours worked by him during that period. Such hourly earnings should not be confused with a nominal hourly rate of pay. If an employee has received extra pay for overtime or extra remuneration in the form of a premium or bonus, such sums are included in his earnings for the period, and his hourly earnings are increased proportionately above his nominal hourly rate.

When the rate of earnings per hour of an employee has been increased by the addition to his regular earnings of extra pay for overtime or of bonus, it becomes impossible to compute full-time earnings by the simple method of multiplying full-time hours by hourly earnings. Full-time earnings are supposed to represent the amount that an employee could earn by working the full-time hours of his occupation. But if his hourly earnings contain an element of extra pay for overtime, the product of full-time hours multiplied by hourly earnings may exceed the amount that he could actually earn by working only the full-time hours. Thus if an employee with a 48-hour week is paid 40 cents an hour for regular time and time and a half for overtime, and works 60 hours during the week, his average hourly earnings for 48 hours at 40 cents and 12 hours at 60 cents amount to 44 cents per hour. His full-time weekly earnings, computed by multiplying his full-time 48 hours by his hourly earnings of 44 cents, would appear to be \$21.12, whereas all he could actually earn by working his regular 48-hour week at 40 cents an hour would be \$19.20.

In the earlier years for which the figures for the industry are given so little extra pay for overtime or for any other cause was found that probably little error was involved in computing full-time earnings by the method under consideration. In the current investigation, however, so many and various methods of giving extra remuneration were found that the computation of full-time earnings in this method would give results very considerably higher than the facts justify. For that reason no figures for full-time earnings are included in the table, and the reader should bear in mind that the product of full-time hours multiplied by hourly earnings can not be used in that capacity.

In Table 2 the averages of Table 1 have been reduced to relatives, with the average for the year 1913 considered as 100. In this table the figures for each occupation are given only for the United States as a whole. The figures show changes in hours and earnings during and immediately after the war in comparison with the conditions prevailing before the war began. In computing these relatives no attempt has been made to use identical establishments from year to year. Great care was exercised by the Bureau in each of the investigations carried out by it to secure an adequate number of representative establishments in each district to give typical results. The attempt to make comparisons from year to year on the basis of identical establishments involves a considerable reduction in the quantity of material available without adding anything to its representative character. It may well happen that because of the comparatively small number of identical establishments a change in hours or earnings in a single one of those establishments would materially distort the resulting relative as a measure of conditions in the industry in general. In the present report the relatives for each year are computed on the basis of averages embodying the records of the entire number of employees for whom information is available.

In computing the totals and the relatives for the various occupations in the open-hearth department (see pages 113-116 and 125) the figures obtained on the Pacific coast have been included. As the data for the Pacific coast district in 1919 shows shorter hours and higher wages than are found in other districts the inclusion of these figures shows a reduction of hours and an increase in wages in the open-hearth department somewhat greater than has actually taken place.

There is only one occupation in which hours are not shorter on the coast than in any other part of the country and only two occupations in which wages are not higher as compared with the next district in order in each occupation. The difference in hours in favor of the coast varies from a minimum of 8.4 hours per week for ingot strippers

to 16.7 hours per week for first melters' helpers; the difference in earnings from 2.1 cents per hour for steel pourers to 21.8 cents per hour for ladle cranemen.

While the Pacific coast data should be included in computing totals for the country as a whole at the present time, the comparison of hours and earnings with those of earlier years may be somewhat fairer if they are omitted. For that reason two lines have been given to the year 1919 in the table of relatives in the open-hearth department found on page 125. The first line gives the relatives for 1919 with the Pacific coast material omitted; the second line gives the relatives for the same year with the Pacific coast material included.

An examination of the tables will show that the increase in wages which has characterized other industries during the period of the war has been particularly marked in this industry. On the other hand the tendency toward shorter working days which has been seen in most industries during this period, and which seems to be reflected in the hours of iron and steel employees during the early years, has been more than overcome by the pressure of war production during the later years. The details of the changes in different occupations are so obvious in the tables themselves as to need no comment.

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919.

Blast Furnaces.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Stokers.</i>						<i>Bottom fillers.</i>					
Eastern.....	1913	5	19	69.4	\$0.183	Eastern.....	1913	3	174	84.0	\$0.164
	1914	5	79	69.8	.173		1914	1	102	84.0	.171
	1915	5	75	71.1	.156		1915	1	36	84.0	.172
	1917	2	71	73.9	.272		1917	1	44	84.0	.285
	1919	3	86	81.2	.422						
Pittsburgh.....	1913	9	789	80.1	.200	Pittsburgh.....	1913	2	48	84.0	.208
	1914	9	636	74.9	.197		1914	1	24	84.0	.210
	1915	9	533	74.8	.201		1915	1	24	84.0	.210
	1917	4	218	81.8	.301						
	1919	6	465	83.6	.489						
Great Lakes and Middle West...	1913	10	234	77.5	.193	Great Lakes and Middle West...	1913	3	92	84.0	.196
	1914	11	193	76.1	.193		1914	3	46	80.9	.192
	1915	11	153	74.3	.191		1915	3	52	79.4	.190
	1917	4	97	72.0	.324		1919	2	47	81.2	.487
	1919	5	289	71.2	.495						
Southern.....	1913	9	127	74.5	.145	Southern.....	1913	5	155	78.2	.144
	1914	10	123	76.2	.140		1914	4	36	84.0	.139
	1915	10	117	76.8	.143		1915	4	36	84.0	.137
	1917	4	55	74.2	.246		1917	2	12	84.0	.215
	1919	6	148	79.7	.349		1919	2	25	84.0	.340
Total.....	1913	33	1,269	78.0	.192	Total.....	1913	13	469	82.1	.168
	1914	35	1,031	74.9	.188		1914	9	208	83.3	.174
	1915	35	878	74.6	.188		1915	9	148	82.4	.176
	1917	14	441	77.4	.295		1917	3	56	84.0	.270
	1919	20	988	79.2	.464		1919	4	72	82.2	.436

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Blast Furnaces—Continued.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Top fillers.</i>						<i>Larrymen's helpers—Concluded.</i>					
Eastern.....	1913	3	24	84.0	\$0.189	Great Lakes and Middle West...	1913	7	82	78.7	\$0.190
	1914	1	22	84.0	.200		1914	9	52	78.5	.189
	1915	1	10	84.0	.200		1915	9	53	77.2	.187
	1917	1	16	84.0	.275		1917	4	44	75.3	.306
Pittsburgh.....	1913	2	11	84.0	.227		1919	4	92	69.3	.491
	1914	1	6	84.0	.238						
	1915	1	6	84.0	.238	Southern.....	1913	4	24	84.0	.144
Great Lakes and Middle West...	1913	3	30	78.4	.238		1914	5	26	84.0	.140
	1914	3	16	70.5	.251		1915	5	34	84.0	.130
	1915	3	16	70.5	.251		1917	2	16	75.0	.223
	1919	2	12	67.0	.644		1919	2	17	84.0	.394
Southern.....	1913	5	30	80.8	.164	Total.....	1913	23	352	82.6	.191
	1914	3	12	84.0	.162		1914	27	250	78.6	.187
	1915	3	12	84.0	.161		1915	27	275	78.3	.185
	1917	2	6	84.0	.208		1917	12	161	79.6	.292
	1919	2	16	84.0	.336		1919	17	299	78.5	.492
Total.....	1913	13	95	81.2	.201	<i>Skip operators.</i>					
	1914	8	56	80.1	.210	Eastern.....	1913	3	10	79.2	.196
	1915	8	44	79.0	.213		1914	4	12	80.0	.194
	1917	3	22	84.0	.257		1915	4	10	81.6	.196
	1919	4	28	76.7	.468		1917	1	4	84.0	.290
<i>Larrymen.</i>							1919	3	10	84.0	.468
Eastern.....	1913	3	10	79.2	.201	Pittsburgh.....	1913	9	84	84.0	.227
	1914	4	12	80.0	.198		1914	9	64	78.4	.230
	1915	4	10	81.6	.198		1915	9	72	78.7	.231
	1917	1	5	84.0	.290		1917	5	54	79.6	.357
	1919	3	11	84.0	.482		1919	8	93	81.6	.565
Pittsburgh.....	1913	9	134	84.0	.214	Great Lakes and Middle West...	1913	6	42	81.1	.225
	1914	9	98	78.7	.217		1914	8	37	78.2	.224
	1915	9	106	78.6	.217		1915	8	40	76.8	.224
	1917	5	68	81.2	.333		1917	4	40	73.8	.365
	1919	8	157	82.6	.544		1919	3	35	70.3	.558
Great Lakes and Middle West...	1913	7	70	78.9	.239	Southern.....	1913	4	22	84.0	.170
	1914	9	56	75.9	.237		1914	7	26	84.0	.169
	1915	9	62	75.1	.233		1915	7	30	84.0	.169
	1917	5	84	73.1	.352		1917	3	20	76.8	.274
	1919	5	97	71.9	.553		1919	4	19	84.0	.379
Southern.....	1913	4	24	84.0	.175	Total.....	1913	22	158	82.9	.217
	1914	5	26	84.0	.168		1914	28	139	79.5	.214
	1915	5	34	84.0	.155		1915	28	152	79.4	.215
	1917	3	26	78.5	.235		1917	13	118	77.3	.343
	1919	4	41	84.0	.330		1919	18	157	79.5	.536
Total.....	1913	23	238	82.3	.217	<i>Blowers.</i>					
	1914	27	192	78.6	.215	Eastern.....	1913	5	14	81.4	.260
	1915	27	212	78.6	.211		1914	6	15	82.1	.285
	1917	14	183	77.2	.327		1915	6	14	82.8	.282
	1919	20	306	79.4	.516		1917	3	10	79.2	.415
<i>Larrymen's helpers.</i>							1919	3	8	84.0	.517
Eastern.....	1913	3	10	79.2	.168	Pittsburgh.....	1913	10	56	84.0	.343
	1914	4	12	80.0	.166		1914	10	57	80.4	.333
	1915	4	10	81.6	.164		1915	10	62	80.5	.347
	1917	1	11	84.0	.270		1917	5	31	80.2	.488
	1919	3	17	84.0	.466		1919	8	52	81.7	.760
Pittsburgh.....	1913	9	236	84.0	.197	Great Lakes and Middle West...	1913	10	54	80.4	.364
	1914	9	160	77.6	.196		1914	11	44	78.5	.375
	1915	9	178	77.3	.196		1915	11	41	77.6	.381
	1917	5	90	81.9	.299		1917	5	25	72.5	.561
	1919	8	173	82.3	.504		1919	6	41	72.8	.845

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Blast Furnaces—Continued.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Blowers—Concld.</i>						<i>Keepers' helpers.</i>					
Southern.....	1913	9	30	82.4	\$0.288	Eastern.....	1913	6	126	82.9	\$0.164
	1914	11	27	84.0	.291		1914	6	92	82.4	.167
	1915	11	32	84.0	.282		1915	6	68	82.9	.161
	1917	5	18	80.0	.415		1917	3	52	81.7	.274
	1919	6	17	84.0	.602		1919	3	33	84.0	.457
Total.....	1913	34	154	82.2	.332	Pittsburgh.....	1913	10	326	84.0	.208
	1914	38	143	80.7	.333		1914	10	268	78.9	.208
	1915	38	149	80.6	.336		1915	10	252	78.6	.208
	1917	18	84	77.8	.485		1917	5	132	79.2	.319
	1919	23	118	79.1	.750		1919	8	280	81.8	.521
<i>Blowing engineers.</i>						Great Lakes and Middle West...	1913	10	300	80.4	.204
Eastern.....	1913	6	20	82.8	.199		1914	11	208	79.2	.204
	1914	6	18	82.7	.209		1915	11	210	77.4	.202
	1915	6	16	82.5	.214		1917	5	122	73.2	.320
	1917	3	16	82.5	.331		1919	6	172	71.5	.502
	1919	3	8	84.0	.517	Southern.....	1913	9	198	81.5	.138
Pittsburgh.....	1913	10	50	84.0	.286		1914	11	166	84.0	.136
	1914	10	44	78.9	.288		1915	11	197	84.0	.134
	1915	10	48	78.8	.287		1917	5	86	79.0	.223
	1917	5	28	78.9	.417		1919	6	137	84.0	.328
	1919	8	54	81.7	.689	Total.....	1913	35	950	82.2	.186
Great Lakes and Middle West...	1913	10	58	79.9	.283		1914	38	734	80.6	.185
	1914	11	54	75.8	.287		1915	38	727	80.1	.182
	1915	11	57	75.6	.286		1917	18	392	77.6	.292
	1917	5	60	72.4	.419		1919	23	622	79.5	.470
	1919	6	62	71.0	.634	<i>Iron handlers and loaders.</i>					
Southern.....	1913	9	28	82.3	.210	Eastern.....	1913	4	56	73.6	.263
	1914	11	31	84.0	.211		1914	3	39	72.0	.196
	1915	11	32	84.0	.207		1915	3	35	75.5	.220
	1917	5	18	78.7	.310		1917	1	6	72.0	.242
	1919	6	21	84.0	.467	Pittsburgh.....	1913	2	32	80.1	.270
Total.....	1913	35	156	82.0	.260		1914	1	18	84.0	.270
	1914	38	147	79.3	.262		1915	1	18	84.0	.278
	1915	38	153	79.1	.262	Great Lakes and Middle West...	1913	3	119	75.7	.269
	1917	18	122	76.1	.391		1914	3	105	74.0	.266
	1919	23	145	78.3	.624		1915	3	102	73.8	.241
<i>Keepers.</i>							1919	1	12	78.0	.493
Eastern.....	1913	6	26	82.2	.196	Southern.....	1913	7	191	68.0	.183
	1914	6	22	81.8	.199		1914	9	143	72.9	.183
	1915	6	16	82.5	.195		1915	9	168	72.8	.171
	1917	3	18	81.3	.308		1917	3	100	71.4	.244
	1919	3	11	84.0	.487		1919	3	82	72.6	.342
Pittsburgh.....	1913	10	92	84.0	.259	Total.....	1913	16	398	72.0	.227
	1914	10	74	78.9	.259		1914	16	305	73.8	.218
	1915	10	78	78.8	.258		1915	16	323	74.0	.204
	1917	5	58	80.4	.372		1917	4	106	71.4	.243
	1919	8	95	81.9	.605		1919	4	94	73.2	.361
Great Lakes and Middle West...	1913	10	74	79.1	.247	<i>Pig machine men.</i>					
	1914	11	56	77.1	.245	Eastern.....	1913	2	27	76.0	.161
	1915	11	56	76.3	.246		1914	3	23	79.1	.163
	1917	5	62	73.2	.361		1915	3	19	80.6	.160
	1919	6	61	75.2	.572		1917	1	10	84.0	.260
Southern.....	1913	9	38	82.7	.181		1919	3	50	84.0	.436
	1914	11	32	84.0	.177	Pittsburgh.....	1913	7	146	84.0	.197
	1915	11	37	84.0	.172		1914	7	96	78.7	.198
	1917	5	24	78.0	.258		1915	7	116	79.8	.195
	1919	6	28	84.0	.389		1917	3	30	83.3	.294
Total.....	1913	35	230	82.0	.235		1919	7	197	83.0	.505
	1914	38	184	79.6	.233						
	1915	38	187	79.4	.232						
	1917	18	162	77.4	.344						
	1919	23	195	80.2	.557						

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Blast Furnaces—Concluded.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Pig machine men—Con.</i>						<i>Cindermen—Con.</i>					
Great Lakes and Middle West...	1913	8	110	80.3	\$0.199	Southern.....	1913	8	49	80.5	\$0.146
	1914	9	115	78.5	.200		1914	9	59	78.1	.135
	1915	9	84	77.7	.200		1915	9	54	78.3	.130
	1917	5	97	74.5	.321		1917	4	34	84.0	.217
	1919	5	81	67.9	.483		1919	5	39	84.0	.342
						Total.....	1913	31	357	80.3	.183
Southern.....	1913	2	20	84.0	.151		1914	31	286	78.3	.176
	1914	2	25	84.0	.155		1915	31	254	78.6	.174
	1915	2	26	84.0	.156		1917	13	168	78.4	.286
	1917	1	8	84.0	.163		1919	20	291	77.2	.473
	1919	3	44	84.0	.380						
Total.....	1913	19	303	81.9	.192	<i>Laborers.</i>					
	1914	21	259	79.2	.192	Eastern.....	1913	6	129	69.0	.151
	1915	21	245	79.6	.190		1914	6	100	68.7	.153
	1917	10	154	77.9	.300		1915	6	53	70.0	.151
	1919	18	372	79.9	.476		1917	3	101	62.4	.271
							1919	3	90	76.2	.423
<i>Cindermen.</i>						Pittsburgh.....	1913	10	351	78.4	.191
Eastern.....	1913	5	35	82.4	.154		1914	10	294	73.1	.192
	1914	5	28	82.3	.157		1915	10	266	74.9	.189
	1915	5	27	82.7	.153		1917	5	366	82.3	.292
	1917	2	12	78.0	.256		1919	8	1,250	82.0	.483
	1919	2	13	84.0	.440						
Pittsburgh.....	1913	8	135	80.7	.194	Great Lakes and Middle West...	1913	9	442	73.0	.189
	1914	6	94	76.3	.192		1914	11	489	68.9	.190
	1915	6	91	77.0	.193		1915	11	322	67.5	.187
	1917	3	54	81.8	.305		1917	5	139	70.2	.296
	1919	7	125	81.8	.500		1919	6	490	73.1	.465
Great Lakes and Middle West...	1913	10	138	79.4	.192	Southern.....	1913	9	271	65.7	.136
	1914	11	105	79.1	.190		1914	10	213	73.1	.137
	1915	11	82	79.2	.189		1915	10	244	72.7	.134
	1917	4	68	73.1	.311		1917	4	92	69.4	.226
	1919	6	114	69.1	.490		1919	6	301	76.7	.330
						Total.....	1913	34	1,193	72.5	.173
							1914	37	1,096	70.8	.177
							1915	37	885	71.3	.171
							1917	17	698	75.3	.281
							1919	23	2,131	78.9	.455

Bessemer Converters.

<i>Stockers.</i>						<i>Cupola melters.</i>					
Pittsburgh.....	1913	4	176	56.8	\$0.421	Pittsburgh.....	1913	4	12	60.2	\$0.513
	1914	4	129	51.1	.377		1914	4	11	53.8	.389
	1915	4	128	52.2	.328		1915	4	11	53.6	.471
	1917	2	112	50.6	.659		1917	2	5	57.6	.866
	1919	4	163	65.8	.655		1919	3	7	59.4	1.013
Great Lakes and Middle West...	1913	1	18	70.7	.248	Great Lakes and Middle West...	1913	1	2	78.0	.470
	1914	2	38	70.7	.259		1914	2	4	75.0	.392
	1915	2	29	70.7	.245		1915	2	4	75.0	.387
	1917	1	32	72.0	.387		1917	1	2	72.0	.495
	1919	1	18	48.0	.460						
Total.....	1913	5	194	58.1	.405	Total.....	1913	5	14	62.7	.507
	1914	6	167	55.5	.351		1914	6	15	59.5	.390
	1915	6	157	55.6	.313		1915	6	15	59.3	.449
	1917	3	144	55.3	.599		1917	3	7	61.7	.760
	1919	5	181	64.0	.636		1919	3	7	59.4	1.013

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Bessemer Converters—Continued.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Cupola tappers.</i>						<i>Regulators, second—Concluded.</i>					
Pittsburgh.....	1913	1	18	50.3	\$0.482	Great Lakes and Middle West...	1913	4	14	74.6	\$0.350
	1914	2	24	50.6	.275		1914	4	9	72.7	.255
	1915	2	18	50.3	.338		1915	4	10	72.3	.320
	1917	1	12	48.0	.773		1917	3	8	72.0	.395
	1919	3	23	60.3	.804		1919	4	16	65.1	.695
Great Lakes and Middle West...	1913	1	4	72.0	.368	Total.....	1913	10	28	68.3	.394
	1914	2	10	72.0	.313		1914	11	25	66.5	.289
	1915	2	6	72.0	.316		1915	11	26	66.6	.324
	1917	1	4	72.0	.390		1917	8	19	67.4	.516
	1919	1	3	48.0	.665		1919	9	33	64.4	.733
Total.....	1913	2	22	54.3	.461	<i>Vesselmen.</i>					
	1914	4	34	56.9	.286	Pittsburgh.....	1913	6	17	53.2	.780
	1915	4	24	55.8	.332		1914	7	20	53.6	.510
	1917	2	16	54.0	.677		1915	7	20	53.5	.562
	1919	4	26	58.9	.788		1917	5	14	50.3	1.041
<i>Blowers.</i>							1919	6	18	58.4	1.113
Pittsburgh.....	1913	6	15	57.7	.622	Great Lakes and Middle West...	1913	4	9	66.7	.675
	1914	7	16	63.0	.529		1914	5	11	59.2	.478
	1915	7	16	62.9	.557		1915	5	12	60.3	.539
	1917	5	12	60.0	.825		1917	3	16	72.0	.765
	1919	6	15	62.9	1.218		1919	3	5	67.2	1.053
Great Lakes and Middle West...	1913	4	8	73.9	.554	Total.....	1913	10	26	57.8	.744
	1914	5	11	65.7	.569		1914	12	31	55.6	.499
	1915	5	11	65.7	.565		1915	12	32	56.0	.554
	1917	3	6	72.0	.700		1917	8	30	61.9	.894
	1919	2	3	64.0	1.518		1919	9	23	60.3	1.100
Total.....	1913	10	23	63.3	.598	<i>Vesselmen's helpers.</i>					
	1914	12	27	64.1	.545	Pittsburgh.....	1913	6	34	52.2	.531
	1915	12	27	64.0	.561		1914	7	37	52.3	.345
	1917	8	18	64.0	.784		1915	7	34	53.0	.383
	1919	8	18	63.1	1.267		1917	5	31	49.5	.731
<i>Regulators, first.</i>							1919	6	48	59.9	.881
Pittsburgh.....	1913	6	14	63.1	.493	Great Lakes and Middle West...	1913	4	19	63.8	.523
	1914	7	16	64.0	.321		1914	5	20	58.1	.338
	1915	7	16	64.4	.346		1915	5	22	59.3	.383
	1917	5	11	64.0	.665		1917	3	14	72.0	.483
	1919	6	18	68.5	.869		1919	4	17	64.3	.789
Great Lakes and Middle West...	1913	3	6	74.0	.464	Total.....	1913	10	53	56.4	.528
	1914	4	8	63.4	.343		1914	12	57	54.3	.342
	1915	4	10	65.1	.360		1915	12	56	55.5	.383
	1917	3	6	72.0	.568		1917	8	45	56.5	.654
	1919	3	5	67.2	.742		1919	10	65	61.1	.857
Total.....	1913	9	20	66.4	.484	<i>Cinder pitmen.</i>					
	1914	11	24	63.8	.328	Pittsburgh.....	1913	4	71	65.4	.232
	1915	11	26	64.7	.351		1914	5	40	71.9	.214
	1917	8	17	66.8	.630		1915	5	36	72.0	.212
	1919	9	23	68.2	.842		1917	3	42	72.0	.321
<i>Regulators, second.</i>							1919	5	76	72.5	.592
Pittsburgh.....	1913	6	14	62.0	.437						
	1914	7	16	63.0	.308						
	1915	7	16	63.1	.327						
	1917	5	11	64.0	.604						
	1919	5	17	63.6	.768						

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Bessemer Converters—Continued.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Cinder pitmen—Concluded.</i>						<i>Ladle liners—Concluded.</i>					
Great Lakes and Middle West...	1913	4	28	73.8	\$0.213	Great Lakes and Middle West...	1913	4	10	64.8	\$0.434
	1914	4	12	72.0	.210		1914	5	11	64.6	.345
	1915	4	12	72.0	.222		1915	5	12	65.3	.385
	1917	2	20	72.0	.333		1917	3	5	69.6	.570
	1919	4	21	65.6	.541		1919	4	9	59.8	.801
Total.....	1913	8	99	67.8	.227	Total.....	1913	10	22	68.7	.418
	1914	9	52	71.9	.213		1914	12	25	68.6	.304
	1915	9	48	72.0	.214		1915	12	26	68.8	.344
	1917	5	62	72.0	.325		1917	8	15	71.2	.583
	1919	9	97	71.0	.581		1919	10	26	69.7	.756
<i>Bottom makers.</i>						<i>Ladle liners' helpers.</i>					
Pittsburgh.....	1913	6	12	73.9	.416	Pittsburgh.....	1913	3	24	71.8	.248
	1914	7	14	73.5	.271		1914	7	24	71.3	.218
	1915	7	14	73.5	.329		1915	7	22	71.8	.223
	1917	5	10	72.0	.566		1917	5	18	72.0	.396
	1919	6	10	73.0	.853		1919	6	42	74.3	.570
Great Lakes and Middle West...	1913	4	7	73.7	.335	Great Lakes and Middle West...	1913	3	14	69.4	.253
	1914	5	8	72.0	.332		1914	4	10	63.9	.232
	1915	5	8	72.0	.337		1915	4	12	65.3	.247
	1917	3	6	72.0	.417		1917	3	16	70.5	.329
	1919	4	11	57.3	.619		1919	4	31	67.8	.525
Totals.....	1913	10	19	73.8	.386	Total.....	1913	9	38	70.9	.247
	1914	12	22	73.0	.293		1914	11	34	69.1	.222
	1915	12	22	73.0	.332		1915	11	34	69.5	.233
	1917	8	16	72.0	.510		1917	8	34	71.3	.365
	1919	10	21	64.8	.730		1919	10	73	71.6	.551
<i>Bottom makers' helpers.</i>						<i>Stopper makers.</i>					
Pittsburgh.....	1913	6	26	72.8	.258	Pittsburgh.....	1913	6	6	69.7	.280
	1914	7	26	72.6	.213		1914	7	7	69.0	.239
	1915	7	24	73.0	.235		1915	7	7	68.0	.254
	1917	5	20	72.0	.397		1917	5	6	65.0	.434
	1919	6	29	73.4	.620		1919	6	8	76.8	.633
Great Lakes and Middle West...	1913	4	14	73.7	.250	Great Lakes and Middle West...	1913	4	4	72.0	.336
	1914	5	13	72.0	.250		1914	5	5	71.8	.268
	1915	5	14	72.0	.247		1915	5	5	72.0	.275
	1917	3	10	72.0	.338		1917	3	4	72.0	.432
	1919	4	14	63.9	.543		1919	4	6	61.1	.622
Total.....	1913	10	40	73.1	.255	Total.....	1913	10	10	70.6	.302
	1914	12	39	72.4	.225		1914	12	12	70.2	.251
	1915	12	38	72.6	.239		1915	12	12	69.7	.263
	1917	8	30	72.0	.377		1917	8	10	67.8	.433
	1919	10	43	70.3	.595		1919	10	14	70.0	.628
<i>Ladle liners.</i>						<i>Stopper setters.</i>					
Pittsburgh.....	1913	6	12	71.9	.404	Pittsburgh.....	1913	6	31	47.9	.534
	1914	7	14	71.8	.271		1914	7	30	47.8	.365
	1915	7	14	71.9	.308		1915	7	30	47.9	.397
	1917	5	10	72.0	.589		1917	5	24	46.7	.851
	1919	6	17	74.9	.732		1919	6	35	59.3	1.154

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Bessemer Converters—Concluded.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Stopper setters—Concluded.</i>						<i>Mold cappers—Concluded.</i>					
Great Lakes and Middle West....	1913	4	12	61.0	\$0.600	Total.....	1913	8	51	56.9	\$0.382
	1914	5	14	67.0	.398		1914	10	39	60.8	.260
	1915	5	12	60.3	.488		1915	10	40	60.9	.294
	1917	3	16	54.0	.761		1917	5	29	54.6	.631
	1919	4	10	61.3	.905		1919	8	49	61.1	.671
Total.....	1913	10	43	51.6	.553	<i>Ingot strippers.</i>					
	1914	12	44	50.7	.376	Pittsburgh.....	1913	6	16	66.0	.364
	1915	12	42	51.5	.423		1914	7	18	66.2	.326
	1917	8	40	49.6	.815		1915	7	18	65.8	.347
	1919	10	45	59.8	1.098		1917	5	23	67.2	.514
<i>Steel pourers.</i>							1919	6	23	64.7	.722
Pittsburgh.....	1913	6	18	47.9	.737	Great Lakes and Middle West....	1913	4	12	75.0	.296
	1914	7	21	47.7	.468		1914	5	11	65.7	.291
	1915	7	21	47.9	.530		1915	5	13	66.7	.310
	1917	5	15	46.3	.982		1917	3	10	72.0	.399
	1919	6	21	56.4	1.175		1919	3	9	62.8	.772
Great Lakes and Middle West....	1913	4	16	64.5	.531	Total.....	1913	10	28	69.9	.334
	1914	5	16	58.9	.412		1914	12	29	66.0	.313
	1915	5	14	61.9	.518		1915	12	31	66.2	.332
	1917	3	12	60.0	.682		1917	8	33	68.7	.479
	1919	3	5	67.2	.688		1919	9	32	64.2	.736
Total.....	1913	10	34	55.7	.640	<i>Laborers.</i>					
	1914	12	37	52.5	.444	Pittsburgh.....	1913	6	445	75.4	.192
	1915	12	35	53.5	.525		1914	7	427	74.7	.193
	1917	8	27	52.7	.849		1915	7	400	74.9	.193
	1919	9	26	58.5	1.082		1917	5	427	73.8	.299
<i>Mold cappers.</i>							1919	6	518	74.2	.485
Pittsburgh.....	1913	5	35	49.3	.431	Great Lakes and Middle West....	1913	4	130	74.5	.190
	1914	6	24	53.8	.259		1914	5	119	71.8	.191
	1915	6	24	53.5	.303		1915	5	96	71.7	.191
	1917	4	23	50.1	.680		1917	3	66	70.5	.297
	1919	6	37	64.4	.669		1919	4	120	58.1	.506
Great Lakes and Middle West....	1913	3	16	73.5	.275	Total.....	1913	10	575	75.2	.192
	1914	4	15	72.0	.262		1914	12	546	74.0	.193
	1915	4	16	72.0	.281		1915	12	496	74.3	.193
	1917	1	6	72.0	.444		1917	8	493	73.4	.298
	1919	2	12	51.1	.679		1919	10	638	71.1	.489

Open-Hearth Furnaces.

<i>Stockers.</i>						<i>Stockers.—Con.</i>					
Eastern.....	1913	4	98	73.8	\$0.171	Great Lakes and Middle West....	1913	6	124	79.7	\$0.202
	1914	6	93	73.8	.174		1914	7	115	78.6	.204
	1915	6	98	74.6	.184		1915	7	120	77.3	.199
	1917	2	40	80.4	.284		1917	5	114	74.3	.317
	1919	3	49	70.9	.473		1919	6	190	74.0	.514
Pittsburgh.....	1913	5	167	78.8	.212	Southern.....	1913	2	22	74.7	.185
	1914	6	175	77.6	.225		1914	3	26	77.5	.170
	1915	6	125	78.4	.218		1915	3	23	82.4	.161
	1917	3	46	80.5	.320		1917	3	43	79.7	.226
	1919	5	178	78.8	.518		1919	3	48	73.4	.422

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Open-Hearth Furnaces—Continued.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Stockers—Concld.</i>						<i>Charging-machine operators—Con.</i>					
Pacific coast.....	1919	1	4	56.0	\$0.500	Pacific coast.....	1919	2	8	56.0	\$0.950
Total.....	1913	17	411	77.7	.198	Total.....	1913	17	76	78.0	.335
	1914	22	409	77.0	.204		1914	22	86	77.4	.307
	1915	22	366	77.3	.199		1915	22	86	77.7	.330
	1917	13	243	77.4	.296		1917	13	64	77.1	.467
	1919	18	469	74.9	.501		1919	19	107	73.0	.763
<i>Stock cranimen.</i>						<i>Melters' helpers, first.</i>					
Eastern.....	1913	4	12	75.0	.205	Eastern.....	1913	4	60	74.4	.348
	1914	6	18	76.2	.205		1914	6	70	77.7	.337
	1915	6	20	75.8	.216		1915	6	76	77.8	.354
	1917	2	14	79.7	.293		1917	2	30	84.0	.461
	1919	3	16	72.3	.537		1919	3	142	72.1	.797
Pittsburgh.....	1913	5	38	79.2	.241	Pittsburgh.....	1913	5	160	76.2	.465
	1914	6	42	77.8	.236		1914	6	168	77.0	.415
	1915	6	36	78.5	.256		1915	6	172	77.0	.441
	1917	3	14	80.4	.381		1917	3	76	75.2	.593
	1919	5	44	76.6	.543		1919	5	147	78.9	.998
Great Lakes and Middle West...	1913	5	30	80.8	.246	Great Lakes and Middle West...	1913	6	122	78.7	.442
	1914	6	34	80.1	.257		1914	7	140	71.4	.463
	1915	6	34	76.9	.278		1915	7	148	70.9	.478
	1917	4	30	74.4	.351		1917	5	130	74.2	.612
	1919	5	43	73.5	.583		1919	6	155	72.7	.967
Southern.....	1913	1	4	78.0	.252	Southern.....	1913	2	22	82.9	.499
	1914	2	4	81.0	.221		1914	3	26	83.1	.438
	1915	2	4	81.0	.214		1915	3	26	82.6	.420
	1917	2	6	80.0	.275		1917	3	36	80.0	.580
	1919	2	10	70.6	.463		1919	3	50	71.2	.871
Pacific coast.....	1919	2	16	56.0	.746	Pacific coast.....	1919	2	34	56.0	1.098
Total.....	1913	15	84	79.1	.238	Total.....	1913	17	364	77.1	.440
	1914	20	98	78.4	.237		1914	22	404	75.6	.420
	1915	20	94	77.4	.253		1915	22	422	75.5	.437
	1917	11	64	77.1	.338		1917	13	272	76.3	.586
	1919	17	129	72.0	.574		1919	19	428	69.9	.960
<i>Charging-machine operators.</i>						<i>Melters' helpers, second.</i>					
Eastern.....	1913	4	14	73.8	.267	Eastern.....	1913	4	58	72.8	.231
	1914	6	18	76.3	.249		1914	6	70	74.9	.228
	1915	6	18	76.3	.259		1915	6	76	75.1	.245
	1917	2	10	80.4	.386		1917	2	30	80.4	.324
	1919	3	12	73.0	.715		1919	3	39	72.3	.631
Pittsburgh.....	1913	5	30	79.6	.321	Pittsburgh.....	1913	5	160	75.7	.317
	1914	6	34	78.0	.297		1914	6	168	75.9	.268
	1915	6	34	78.0	.316		1915	6	172	76.0	.310
	1917	3	16	78.0	.402		1917	3	76	75.2	.424
	1919	5	39	76.8	.741		1919	5	159	76.1	.703
Great Lakes and Middle West...	1913	6	26	79.4	.384	Great Lakes and Middle West...	1913	6	120	78.8	.291
	1914	7	26	75.7	.357		1914	7	138	71.5	.300
	1915	7	26	76.6	.409		1915	7	146	70.9	.304
	1917	5	28	74.6	.474		1917	5	130	74.2	.419
	1919	6	37	72.5	.784		1919	6	158	72.1	.677
Southern.....	1913	2	6	74.0	.351						
	1914	3	8	82.5	.318						
	1915	3	8	82.5	.290						
	1917	3	10	79.2	.485						
	1919	3	11	73.5	.691						

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Open-Hearth Furnaces—Continued.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Melters' helpers, second—Concluded.</i>						<i>Stopper setters—Concluded.</i>					
Southern.....	1913	2	22	82.4	\$0.284	Pacific coast.....	1919	1	4	56.0	\$0.911
	1914	3	26	83.1	.248	Total.....	1913	9	30	77.3	.325
	1915	3	26	82.6	.234		1914	10	32	75.0	.287
	1917	3	36	80.0	.325		1915	10	32	74.6	.296
	1919	3	43	68.9	.586		1917	8	36	75.3	.414
Pacific coast.....	1919	2	32	56.0	.785		1919	10	48	71.4	.663
Total.....	1913	17	360	76.7	.292	<i>Steel pourers.</i>					
	1914	22	402	74.7	.278	Eastern.....	1913	3	6	73.8	.331
	1915	22	420	74.5	.291		1914	5	12	75.9	.296
	1917	13	272	75.9	.397		1915	5	12	75.9	.317
	1919	19	431	72.1	.681		1917	1	4	78.0	.467
<i>Melters' helpers, third.</i>							1919	3	11	73.1	.769
Eastern.....	1913	3	31	75.0	.170	Pittsburgh.....	1913	5	24	78.1	.348
	1914	5	50	76.0	.176		1914	6	28	75.7	.320
	1915	5	54	76.2	.189		1915	6	28	75.7	.342
	1917	1	18	78.0	.300		1917	3	12	77.0	.530
	1919	3	61	71.3	.523		1919	5	23	75.7	.768
Pittsburgh.....	1913	5	184	77.9	.226	Great Lakes and Middle West...	1913	6	18	78.0	.372
	1914	6	186	76.0	.213		1914	7	20	78.0	.355
	1915	6	182	76.3	.228		1915	7	20	75.6	.386
	1917	3	76	76.7	.350		1917	5	24	74.0	.435
	1919	5	176	76.0	.560		1919	6	27	69.7	.791
Great Lakes and Middle West...	1913	6	183	79.9	.218	Southern.....	1913	2	8	73.5	.462
	1914	7	158	79.3	.217		1914	3	10	75.6	.416
	1915	7	169	79.4	.213		1915	3	10	75.6	.380
	1917	4	138	77.2	.333		1917	3	8	79.5	.465
	1919	6	239	76.1	.530		1919	3	10	67.6	.774
Southern.....	1913	2	60	73.4	.185	Pacific coast.....	1919	2	7	56.0	.812
	1914	3	48	78.0	.181	Total.....	1913	16	56	77.0	.370
	1915	3	49	78.6	.175		1914	21	70	76.4	.339
	1917	3	36	80.0	.272		1915	21	70	75.7	.356
	1919	2	37	80.9	.470		1917	12	48	76.0	.466
Pacific coast.....	1919	2	49	56.0	.668		1919	19	78	70.4	.781
Total.....	1913	16	458	77.9	.214	<i>Mold cappers.</i>					
	1914	21	442	77.4	.207	Eastern.....	1913	2	10	76.6	.182
	1915	21	454	77.7	.212		1914	2	8	80.8	.180
	1917	11	268	77.5	.328		1915	2	8	80.8	.180
	1919	18	562	74.0	.547		1917	1	2	84.9	.280
<i>Stopper setters.</i>						Pittsburgh.....	1913	5	30	79.1	.262
Pittsburgh.....	1913	4	18	77.5	.354		1914	6	38	76.9	.231
	1914	4	18	72.7	.299		1915	6	38	76.9	.252
	1915	4	18	72.0	.318		1917	3	20	79.8	.389
	1917	2	8	73.5	.423		1919	5	52	77.0	.599
	1919	4	22	75.8	.750	Great Lakes and Middle West ..	1913	5	28	78.9	.273
Great Lakes and Middle West...	1913	4	10	76.8	.286		1914	5	24	78.0	.249
	1914	4	10	76.8	.286		1915	5	26	73.4	.280
	1915	4	10	76.8	.286		1917	2	16	72.0	.342
	1917	4	24	75.0	.408		1919	5	35	70.7	.578
	1919	4	19	72.4	.523	Southern.....	1919	2	5	63.2	.624
Southern.....	1913	1	2	78.0	.260	Total.....	1913	12	68	78.6	.255
	1914	2	4	81.0	.237		1914	13	70	77.7	.232
	1915	2	4	81.0	.220		1915	13	72	76.1	.254
	1917	2	4	81.0	.432		1917	6	38	76.7	.364
	1919	1	3	53.3	.575		1919	12	92	73.8	.592

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Open-Hearth Furnaces—Concluded.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Ladle cranemen.</i>						<i>Ingot strippers—Concluded.</i>					
Eastern.....	1913	4	14	74.1	\$0.259	Southern.....	1913	2	4	75.0	\$0.322
	1914	6	22	75.5	.246		1914	3	6	78.0	.278
	1915	6	22	75.5	.255		1915	3	6	78.0	.258
	1917	2	10	80.4	.396		1917	3	6	79.5	.446
	1919	3	16	72.0	.707		1919	3	10	64.4	.538
Pittsburgh.....	1913	5	38	78.2	.338	Pacific coast.....	1919	2	6	56.0	.804
	1914	6	42	76.1	.300	Total.....	1913	14	41	76.0	.302
	1915	6	42	76.1	.320		1914	18	47	75.8	.292
	1917	3	20	76.8	.489		1915	18	48	76.3	.303
	1919	5	41	76.1	.711		1917	13	39	70.9	.449
Great Lakes and Middle West ..	1913	6	30	78.4	.370		1919	17	56	66.6	.729
	1914	7	29	78.2	.343	<i>Laborers.</i>					
	1915	7	33	76.4	.385	Eastern.....	1913	4	113	63.1	.168
	1917	5	38	73.9	.464		1914	6	58	67.2	.169
	1919	6	41	73.7	.744		1915	6	46	64.3	.171
Southern.....	1913	2	8	73.5	.386		1917	2	135	68.4	.287
	1914	3	11	75.7	.344		1919	3	37	67.5	.408
	1915	3	10	75.6	.325	Pittsburgh.....	1913	5	424	78.5	.190
	1917	3	14	79.7	.490		1914	6	414	71.3	.188
	1919	3	21	67.8	.684		1915	6	349	72.8	.193
Pacific coast.....	1919	2	10	56.0	.962		1917	3	211	78.2	.300
Total.....	1913	17	90	77.2	.341		1919	5	832	78.5	.473
	1914	22	104	76.5	.305	Great Lakes and Middle West...	1913	6	214	79.0	.190
	1915	22	107	76.0	.327		1914	7	221	69.5	.191
	1917	13	82	76.4	.466		1915	7	235	71.9	.191
	1919	19	129	71.9	.736		1917	5	267	75.6	.299
<i>Ingot strippers.</i>							1919	6	375	76.8	.486
Eastern.....	1913	1	6	79.0	.183	Southern.....	1913	2	49	73.7	.152
	1914	2	8	78.8	.219		1914	3	112	64.3	.169
	1915	2	8	78.8	.226		1915	3	93	63.4	.158
	1917	2	6	82.0	.321		1917	3	40	66.9	.221
	1919	1	2	78.0	.780		1919	3	277	65.0	.388
Pittsburgh.....	1913	5	17	72.7	.352	Pacific coast.....	1919	2	242	56.0	.490
	1914	6	19	72.9	.332	Total.....	1913	17	800	76.2	.185
	1915	6	19	73.6	.338		1914	22	805	69.5	.185
	1917	3	13	59.1	.563		1915	22	723	70.8	.186
	1919	5	19	70.5	.831		1917	13	653	74.4	.292
Great Lakes and Middle West...	1913	6	14	78.9	.287		1919	19	1,763	72.7	.464
	1914	7	14	77.1	.285						
	1915	7	15	77.6	.317						
	1917	5	14	73.7	.400						
	1919	6	19	65.9	.699						

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Blooming Mills.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Pit cranemen.</i>						<i>Heaters' helpers—</i>					
						<i>Concluded.</i>					
Eastern.....	1913	3	14	68.7	\$0.326	Pittsburgh.....	1913	5	31	62.8	\$0.378
	1914	3	12	64.8	.344		1914	5	27	61.7	.354
	1915	3	10	64.6	.354		1915	5	27	61.2	.370
	1917	1	4	78.0	.443		1917	1	9	48.0	.530
	1919	3	8	73.9	.628		1919	5	35	62.9	.884
Pittsburgh.....	1913	8	44	69.6	.383	Great Lakes and					
	1914	10	52	67.6	.353	Middle West...	1913	3	11	62.2	.312
	1915	10	52	67.5	.368		1914	3	6	64.0	.351
	1917	5	34	59.8	.607		1915	3	6	64.0	.363
	1919	7	57	65.3	.806		1917	1	2	72.0	.565
Great Lakes and							1919	4	17	60.0	.761
Middle West...	1913	6	49	68.8	.356	Total.....	1913	10	52	64.6	.359
	1914	7	50	64.9	.367		1914	10	39	62.4	.355
	1915	7	49	65.5	.389		1915	10	39	62.1	.369
	1917	4	25	69.1	.464		1917	2	11	52.4	.536
	1919	6	56	64.5	.790		1919	12	62	64.5	.803
Southern.....	1913	2	8	72.0	.440	<i>Bottom makers.</i>					
	1914	3	10	72.0	.344	Eastern.....	1913	1	4	65.5	.297
	1915	3	8	72.0	.359		1914	2	8	68.8	.326
	1917	2	8	76.5	.599		1915	2	6	69.8	.362
	1919	3	12	72.7	.784		1917	1	6	78.0	.370
Total.....	1913	19	115	69.3	.369		1919	2	10	71.6	.589
	1914	23	124	66.6	.357	Pittsburgh.....	1913	7	30	71.1	.425
	1915	23	119	66.7	.375		1914	9	41	66.3	.394
	1917	12	71	66.0	.546		1915	9	41	65.9	.413
	1919	19	133	66.1	.812		1917	4	14	62.9	.624
<i>Heaters.</i>							1919	6	44	67.2	.973
Eastern.....	1913	3	10	78.9	.568	Great Lakes and					
	1914	3	8	75.0	.525	Middle West...	1913	5	22	74.2	.307
	1915	3	8	75.0	.598		1914	6	23	71.3	.359
	1917	1	2	78.0	.584		1915	6	22	71.7	.382
	1919	3	8	78.0	.947		1917	4	12	72.0	.417
Pittsburgh.....	1913	8	25	71.4	.652		1919	5	35	68.7	.749
	1914	10	32	69.5	.550	Southern.....	1913	2	6	72.0	.338
	1915	10	32	69.9	.585		1914	3	7	72.9	.315
	1917	5	25	58.2	.790		1915	3	7	72.9	.296
	1919	7	33	66.2	1.290		1917	2	6	80.0	.487
Great Lakes and							1919	3	8	77.5	.729
Middle West...	1913	6	38	68.2	.555	Total.....	1913	15	62	71.9	.367
	1914	7	41	67.0	.533		1914	20	79	68.6	.370
	1915	7	36	67.0	.591		1915	20	76	68.5	.389
	1917	4	16	72.0	.689		1917	11	38	70.8	.497
	1919	5	41	64.6	1.134		1919	16	97	64.9	.833
Southern.....	1913	2	6	76.0	.642	<i>Bottom makers'</i>					
	1914	3	8	75.0	.578	<i>helpers.</i>					
	1915	3	8	78.0	.535	Eastern.....	1914	1	2	72.0	.225
	1917	2	4	81.0	.902		1915	1	2	72.0	.237
	1919	3	11	73.5	1.162	Pittsburgh.....	1913	7	34	69.8	.302
Total.....	1913	19	79	71.2	.594		1914	8	38	70.4	.283
	1914	23	89	69.3	.542		1915	8	40	70.9	.284
	1915	23	84	69.9	.584		1917	3	16	64.0	.453
	1917	12	47	65.7	.756		1919	6	49	63.3	.778
	1919	18	93	67.5	1.177	Great Lakes and					
<i>Heaters' helpers.</i>						Middle West...	1913	4	25	74.9	.217
Eastern.....	1913	2	10	72.7	.350		1914	5	22	67.8	.273
	1914	2	6	64.0	.359		1915	5	26	69.4	.264
	1915	2	6	64.0	.370		1917	4	16	72.0	.352
	1919	3	10	75.5	.593		1919	4	40	68.0	.535

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Blooming Mills—Continued.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Bottom markers' helpers—Concl'd.</i>						<i>Rollers—Concl'd.</i>					
Southern.....	1913	2	6	72.0	\$0.238	Total.....	1913	19	46	66.2	\$0.701
	1914	3	8	72.0	.235		1914	23	54	63.6	.684
	1915	3	8	72.0	.225		1915	23	53	63.5	.697
	1917	2	12	80.0	.336		1917	12	34	62.4	.912
	1919	3	22	75.5	.550		1919	18	50	60.4	1.353
Total.....	1913	13	65	72.0	.263	<i>Manipulators.</i>					
	1914	17	70	69.8	.273	Eastern.....	1913	3	8	68.3	.360
	1915	17	76	70.5	.269		1914	3	6	65.8	.366
	1917	9	44	71.3	.384		1915	3	5	65.9	.435
	1919	13	111	67.4	.645		1917	1	2	78.0	.412
<i>Roll engineers.</i>							1919	3	4	70.1	.746
Eastern.....	1913	3	6	69.3	.415	Pittsburgh.....	1913	8	24	60.5	.512
	1914	3	6	65.8	.441		1914	10	28	59.7	.432
	1915	3	5	65.9	.485		1915	10	28	59.7	.459
	1917	1	4	78.0	.373		1917	5	19	53.5	.751
	1919	3	6	70.8	.771		1919	7	27	55.7	1.029
Pittsburgh.....	1913	8	24	62.8	.539	Great Lakes and Middle West...	1913	6	25	68.0	.375
	1914	10	28	60.6	.473		1914	7	24	63.2	.345
	1915	10	28	60.6	.501		1915	7	23	66.0	.383
	1917	5	19	54.2	.797		1917	4	10	72.0	.464
	1919	7	30	57.9	1.004		1919	6	27	63.9	.868
Great Lakes and Middle West...	1913	6	19	74.2	.396	Southern.....	1913	2	3	72.0	.446
	1914	7	22	70.6	.414		1914	3	4	72.0	.411
	1915	7	22	70.4	.439		1915	3	4	72.0	.395
	1917	4	11	72.0	.560		1917	2	3	76.0	.659
	1919	6	26	65.5	.915		1919	3	5	68.3	.816
Southern.....	1913	2	3	76.0	.513	Total.....	1913	19	60	65.3	.431
	1914	3	4	72.0	.458		1914	23	62	62.4	.394
	1915	3	4	72.0	.422		1915	23	60	63.4	.420
	1917	2	3	76.0	.761		1917	12	34	62.4	.639
	1919	3	6	65.3	.834		1919	19	63	61.1	.925
Total.....	1913	19	52	68.5	.471	<i>Tablemen.</i>					
	1914	23	60	65.6	.447	Eastern.....	1913	2	4	71.1	.270
	1915	23	59	65.4	.471		1914	2	4	66.0	.318
	1917	12	37	63.8	.678		1915	2	4	66.0	.340
	1919	19	68	62.6	.934		1919	2	4	70.5	.553
<i>Rollers.</i>						Pittsburgh.....	1913	5	16	63.8	.386
Eastern.....	1913	3	6	69.3	.499		1914	6	19	61.1	.341
	1914	3	6	65.8	.672		1915	6	17	59.8	.365
	1915	3	5	65.9	.706		1917	2	8	56.0	.479
	1917	1	2	78.0	.620		1919	5	31	63.6	.694
	1919	3	4	70.1	1.178	Great Lakes and Middle West...	1913	2	5	72.0	.216
Pittsburgh.....	1913	8	24	60.5	.791		1914	3	8	63.0	.303
	1914	10	28	59.7	.687		1915	3	8	63.0	.305
	1915	10	28	59.7	.692		1919	4	15	55.9	.628
	1917	5	19	53.5	.980	Southern.....	1913	2	4	72.0	.249
	1919	7	29	54.5	1.942		1914	3	5	72.0	.227
Great Lakes and Middle West...	1913	6	13	73.9	.612		1915	3	5	72.0	.220
	1914	7	16	67.5	.693		1917	2	5	74.4	.310
	1915	7	16	67.5	.715		1919	3	6	65.3	.526
	1917	4	10	72.0	.780	Total.....	1913	11	29	67.3	.322
	1919	5	15	64.8	1.215		1914	14	36	63.6	.314
Southern.....	1913	2	3	72.0	.777		1915	14	34	63.1	.327
	1914	3	4	72.0	.647		1917	4	13	63.1	.414
	1915	3	4	72.0	.651		1919	14	56	62.2	.648
	1917	2	3	76.0	1.117						
	1919	3	6	65.3	1.236						

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Blooming Mills—Concluded.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Shearmen.</i>						<i>Shearmen's helpers—Concld.</i>					
Eastern.....	1913	3	6	69.3	\$0.382	Southern.....	1913	2	8	72.0	\$0.203
	1914	3	6	65.8	.353		1914	3	9	72.0	.198
	1915	3	5	65.9	.385		1915	3	9	72.0	.190
	1917	1	2	78.0	.410		1917	2	5	76.8	.296
	1919	3	4	70.1	.691		1919	3	19	66.9	.471
Pittsburgh.....	1913	8	28	67.3	.358	Total.....	1913	18	111	69.5	.267
	1914	10	34	66.0	.337		1914	20	113	68.4	.256
	1915	10	34	66.0	.341		1915	20	114	68.5	.258
	1917	5	15	58.1	.592		1917	10	29	68.1	.412
	1919	7	25	63.0	.805		1919	19	150	66.6	.597
Great Lakes and Middle West...	1913	6	19	65.7	.386	<i>Laborers.</i>					
	1914	7	21	61.7	.359	Eastern.....	1913	3	19	66.3	.162
	1915	7	19	64.4	.403		1914	3	12	61.3	.172
	1917	4	10	72.0	.448		1915	3	12	69.3	.154
	1919	6	23	61.5	.832		1917	1	2	84.0	.250
Southern.....	1913	2	3	72.0	.359		1919	3	19	70.2	.437
	1914	3	4	72.0	.330	Pittsburgh.....	1913	8	147	73.1	.192
	1915	3	4	72.0	.312		1914	9	136	72.0	.192
	1917	2	3	76.0	.503		1915	9	158	72.8	.192
	1919	3	6	65.3	.634		1917	4	244	75.3	.300
Total.....	1913	19	56	67.2	.370		1919	7	179	71.9	.489
	1914	23	65	65.0	.345	Great Lakes and Middle West...	1913	6	102	74.4	.190
	1915	23	62	65.9	.362		1914	7	96	72.0	.190
	1917	12	30	65.9	.523		1915	7	102	72.0	.190
	1919	19	58	63.1	.790		1917	4	88	69.1	.295
<i>Shearmen's helpers.</i>							1919	6	229	65.7	.480
Eastern.....	1913	2	8	67.2	.269	Southern.....	1913	2	24	73.0	.138
	1914	2	18	68.0	.272		1914	3	23	74.1	.148
	1915	2	18	68.0	.295		1915	3	18	71.3	.140
	1919	3	23	70.1	.573		1917	2	54	77.4	.217
Pittsburgh.....	1913	8	63	66.8	.291		1919	3	68	76.6	.386
	1914	9	61	66.4	.274	Total.....	1913	19	292	73.1	.185
	1915	9	61	66.4	.266		1914	22	267	71.7	.187
	1917	5	16	63.5	.462		1915	22	290	72.3	.187
	1919	7	62	63.8	.678		1917	11	388	74.3	.287
Great Lakes and Middle West...	1913	6	32	74.8	.237		1919	19	495	69.6	.469
	1914	6	25	72.0	.222						
	1915	6	26	72.5	.237						
	1917	3	8	72.0	.384						
	1919	6	46	68.4	.551						

Plate Mills.

<i>Charging-crane and charging-machine operators.</i>						<i>Charging-crane and charging-machine operators—Concld.</i>					
Eastern.....	1913	2	10	66.8	\$0.235	Great Lakes and Middle West...	1913	4	12	70.5	\$0.373
	1914	3	16	65.3	.227		1914	4	12	70.5	.301
	1915	3	16	65.3	.238		1915	4	12	70.5	.317
	1917	1	4	66.0	.351		1917	3	10	69.7	.517
	1919	2	18	68.0	.499		1919	3	12	74.0	.790
Pittsburgh.....	1913	4	24	72.5	.366	Total.....	1913	10	46	70.7	.339
	1914	5	24	73.3	.360		1914	12	52	70.3	.305
	1915	5	26	73.3	.391		1915	12	54	70.3	.329
	1917	3	16	72.0	.490		1917	7	30	70.4	.480
	1919	5	41	71.6	.911		1919	10	71	71.1	.786

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Plate Mills—Continued.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Heaters.</i>						<i>Roll engineers—Concluded.</i>					
Eastern.....	1913	2	18	67.6	\$0.426	Total.....	1913	11	34	72.4	\$0.308
	1914	3	27	65.9	.466		1914	13	38	70.2	.307
	1915	3	26	66.1	.447		1915	13	39	69.7	.309
	1917	1	4	66.0	.566		1917	7	20	70.9	.444
	1919	2	24	68.5	.922		1919	10	41	72.1	.753
Pittsburgh.....	1913	5	25	74.3	.631	<i>Rollers.</i>					
	1914	6	26	75.4	.610	Eastern.....	1913	2	8	65.6	.491
	1915	6	26	75.3	.668		1914	3	10	65.1	.524
	1917	3	16	72.0	.851		1915	3	10	65.1	.487
	1919	5	27	71.6	1.559		1917	1	4	66.0	.586
Great Lakes and Middle West...	1913	4	11	72.6	.625		1919	2	19	69.2	.761
	1914	4	11	70.4	.489	Pittsburgh.....	1913	5	13	70.5	.719
	1915	4	9	70.1	.555		1914	6	14	70.2	.812
	1917	3	10	69.7	.726		1915	6	14	70.1	.870
	1919	3	11	73.1	1.145		1917	3	8	72.0	1.105
Total.....	1913	11	54	71.7	.562		1919	5	15	71.6	1.764
	1914	13	64	70.5	.529	Great Lakes and Middle West...	1913	2	4	67.6	1.398
	1915	13	61	70.6	.557		1914	2	4	67.6	.770
	1917	7	30	70.4	.771		1915	2	4	67.6	.875
	1919	10	62	70.6	1.239		1917	3	6	68.2	1.168
<i>Heaters' helpers.</i>							1919	2	6	72.0	1.788
Eastern.....	1913	2	50	66.3	.203	Total.....	1913	9	25	68.5	.755
	1914	3	52	65.1	.205		1914	11	28	68.0	.703
	1915	3	50	65.2	.200		1915	11	28	67.9	.734
	1917	1	12	66.0	.333		1917	7	18	69.4	1.011
	1919	2	72	70.6	.466		1919	9	40	70.5	1.291
Pittsburgh.....	1913	5	41	70.9	.270	<i>Screwmen.</i>					
	1914	6	46	70.1	.284	Eastern.....	1913	2	7	66.2	.353
	1915	6	45	69.8	.309		1914	2	6	65.5	.278
	1917	3	12	70.2	.556		1915	2	6	65.5	.292
	1919	5	44	71.1	.801		1917	1	4	66.0	.451
Great Lakes and Middle West...	1913	3	14	69.3	.375		1919	2	10	69.6	.776
	1914	3	14	69.3	.282	Pittsburgh.....	1913	5	14	70.2	.472
	1915	3	14	69.3	.346		1914	6	16	69.7	.487
	1917	2	12	64.3	.517		1915	6	16	69.4	.517
	1919	2	9	74.7	.667		1917	3	8	72.0	.795
Total.....	1913	10	105	68.5	.252		1919	5	18	71.5	1.250
	1914	12	112	67.7	.247	Great Lakes and Middle West...	1913	2	6	69.1	.682
	1915	12	109	67.6	.264		1914	2	6	69.1	.448
	1917	6	36	67.4	.469		1915	2	4	67.6	.580
	1919	9	125	71.1	.599		1917	3	10	69.7	.728
<i>Roll engineers.</i>							1919	2	6	72.0	1.301
Eastern.....	1913	2	10	65.6	.257	Total.....	1913	9	27	68.9	.488
	1914	3	13	65.3	.281		1914	10	28	68.7	.434
	1915	3	16	65.3	.269		1915	10	26	68.3	.474
	1917	1	4	66.0	.303		1917	7	22	69.9	.702
	1919	2	12	71.0	.634		1919	9	34	71.0	1.120
Pittsburgh.....	1913	5	15	76.4	.337	<i>Table operators.</i>					
	1914	6	16	73.2	.322	Eastern.....	1913	2	8	65.6	.281
	1915	6	16	73.1	.339		1914	3	9	65.1	.233
	1917	3	8	75.0	.515		1915	3	10	65.1	.219
	1919	5	21	71.7	.785		1917	1	4	66.0	.351
Great Lakes and Middle West...	1913	4	9	73.3	.318		1919	2	14	68.6	.562
	1914	4	9	72.0	.316	Pittsburgh.....	1913	5	15	69.9	.341
	1915	4	7	72.0	.329		1914	6	16	69.6	.365
	1917	3	8	69.1	.444		1915	6	16	69.5	.386
	1919	3	8	75.0	.845		1917	3	6	72.0	.538
							1919	5	19	71.2	.954

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Plate Mills—Concluded.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Table operators—Concluded.</i>						<i>Shearmen—Concl.</i>					
Great Lakes and Middle West...	1913	2	8	67.6	\$0.488	Pittsburgh.....	1913	5	35	70.9	\$0.491
	1914	2	6	66.2	.314		1914	6	35	70.5	.515
	1915	2	6	66.2	.374		1915	6	35	70.1	.555
	1917	2	10	67.4	.558		1917	3	22	72.0	.728
	1919	2	12	72.0	.957		1919	5	54	71.6	1.137
Total.....	1913	9	31	68.2	.363	Great Lakes and Middle West...	1913	4	18	67.2	.371
	1914	11	31	67.6	.317		1914	4	18	67.2	.303
	1915	11	32	67.5	.332		1915	4	18	67.2	.347
	1917	6	20	68.5	.510		1917	3	16	67.5	.571
	1919	9	45	70.6	.833		1919	3	20	72.0	.976
<i>Hookmen.</i>						Total.....	1913	11	69	68.8	.415
Eastern.....	1913	2	27	66.3	.241		1914	13	73	68.4	.406
	1914	3	22	65.5	.226		1915	13	73	68.2	.436
	1915	3	24	65.5	.208		1917	7	42	69.7	.638
	1917	1	8	66.0	.283		1919	10	97	70.7	.982
	1919	2	14	69.4	.486	<i>Shearmen's helpers.</i>					
Pittsburgh.....	1913	5	30	69.9	.299	Eastern.....	1913	2	81	65.7	.200
	1914	6	40	69.8	.331		1914	3	91	65.1	.197
	1915	6	40	69.6	.371		1915	3	99	65.0	.189
	1917	3	19	72.0	.498		1917	1	24	66.0	.250
	1919	5	43	71.3	.879		1919	2	118	67.5	.452
Great Lakes and Middle West...	1913	2	19	69.2	.439	Pittsburgh.....	1913	5	219	70.7	.276
	1914	2	12	67.6	.298		1914	6	216	70.5	.277
	1915	2	12	67.6	.332		1915	6	214	70.6	.297
	1917	2	22	68.9	.528		1917	3	116	72.0	.414
	1919	2	22	72.0	.883		1919	5	339	73.4	.729
Total.....	1913	9	76	68.4	.313	Great Lakes and Middle West...	1913	4	125	67.0	.236
	1914	11	74	68.2	.294		1914	4	101	66.0	.211
	1915	11	76	68.0	.314		1915	4	93	66.9	.250
	1917	6	49	69.6	.476		1917	3	108	66.4	.418
	1919	9	79	71.2	.811		1919	3	170	72.0	.555
<i>Roll hands, other.</i>						Total.....	1913	11	425	68.7	.250
Eastern.....	1913	2	6	67.3	.193		1914	13	408	68.2	.243
	1914	3	10	64.1	.232		1915	13	406	68.4	.260
	1915	3	10	64.1	.228		1917	7	248	69.0	.400
	1917	1	4	66.0	.281		1919	10	627	71.9	.630
	1919	2	7	69.4	.478	<i>Laborers.</i>					
Pittsburgh.....	1913	4	12	70.9	.264	Eastern.....	1913	2	94	62.9	.151
	1914	5	12	70.9	.278		1914	3	84	61.6	.151
	1915	5	12	70.9	.289		1915	3	85	61.3	.151
	1917	3	10	72.0	.429		1917	1	11	57.3	.250
	1919	5	21	71.6	.725		1919	2	157	65.8	.368
Great Lakes and Middle West...	1913	1	2	63.3	.490	Pittsburgh.....	1913	4	118	72.8	.191
	1914	1	2	63.3	.260		1914	5	116	71.5	.188
	1915	1	2	63.3	.340		1915	5	108	71.1	.189
	1917	1	2	60.5	.500		1917	2	126	70.6	.300
	1919	1	2	72.0	.722		1919	4	302	70.3	.484
Total.....	1913	7	20	69.1	.265	Great Lakes and Middle West...	1913	4	16	69.8	.195
	1914	9	24	67.4	.257		1914	4	16	71.3	.190
	1915	9	24	67.4	.268		1915	4	15	65.1	.189
	1917	5	16	69.1	.401		1917	2	59	72.0	.289
	1919	8	30	71.1	.667		1919	3	125	69.0	.469
<i>Shearmen.</i>						Total.....	1913	10	228	68.5	.175
Eastern.....	1913	2	16	66.2	.298		1914	12	216	67.6	.174
	1914	3	20	65.6	.309		1915	12	208	66.7	.174
	1915	3	20	65.6	.307		1917	5	196	70.3	.224
	1917	1	4	66.0	.407		1919	9	584	68.8	.449
	1919	2	23	67.3	.623						

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Continued.

Sheet Mills.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Pair heaters.</i>						<i>Catchers—Concld.</i>					
Pittsburgh.....	1913	9	231	42.7	\$0.555	Total.....	1913	13	336	42.8	\$0.629
	1914	10	261	42.7	.561		1914	15	399	42.8	.636
	1915	10	231	42.7	.534		1915	15	350	42.8	.595
	1917	4	138	44.3	1.103		1917	8	276	43.7	1.256
	1919	5	132	43.8	1.170		1919	8	351	42.8	1.182
Great Lakes and Middle West....	1913	4	105	43.2	.516	<i>Matchers.</i>					
	1914	5	138	43.1	.500	Pittsburgh.....	1913	9	231	42.7	.465
	1915	5	123	43.2	.488		1914	10	261	42.7	.507
	1917	4	138	43.0	.973		1915	10	231	42.7	.488
	1919	3	182	43.5	.968		1917	4	138	44.3	.975
Total.....	1913	13	336	42.8	.543		1919	5	130	43.7	1.045
	1914	15	299	42.8	.540	Great Lakes and Middle West....	1913	4	105	43.2	.410
	1915	15	354	42.8	.518		1914	5	138	43.1	.441
	1917	8	276	43.7	1.038		1915	5	123	43.2	.451
	1919	8	314	43.6	1.053		1917	4	138	43.0	.915
<i>Rollers.</i>							1919	3	193	43.6	.937
Pittsburgh.....	1913	9	230	42.7	1.484	Total.....	1913	13	336	42.8	.448
	1914	10	258	42.7	1.491		1914	15	399	42.8	.484
	1915	10	225	42.7	1.279		1915	15	354	42.8	.475
	1917	4	138	44.3	2.651		1917	8	276	43.7	.946
	1919	5	119	43.7	2.608		1919	8	323	43.7	.980
Great Lakes and Middle West....	1913	4	105	43.2	1.459	<i>Doublers.</i>					
	1914	5	136	43.1	1.316	Pittsburgh.....	1913	9	231	42.7	.445
	1915	5	123	43.2	1.281		1914	10	261	42.7	.483
	1917	4	138	43.0	2.530		1915	10	231	42.7	.467
	1919	3	153	43.6	2.550		1917	4	138	44.3	.938
Total.....	1913	13	335	42.8	1.476		1919	5	155	43.7	1.019
	1914	15	394	42.8	1.431	Great Lakes and Middle West....	1913	4	105	43.2	.392
	1915	15	348	42.9	1.280		1914	5	138	43.1	.421
	1917	8	276	43.7	2.591		1915	5	123	43.2	.428
	1919	8	272	43.6	2.575		1917	4	138	43.8	.855
<i>Roughers.</i>							1919	3	210	43.5	.861
Pittsburgh.....	1913	9	231	42.7	.672	Total.....	1913	13	336	42.8	.429
	1914	10	261	42.7	.678		1914	15	399	42.8	.462
	1915	10	230	42.7	.641		1915	15	354	42.8	.453
	1917	4	138	44.3	1.361		1917	8	276	43.7	.906
	1919	5	128	43.8	1.476		1919	8	365	43.6	.928
Great Lakes and Middle West....	1913	4	105	43.2	.577	<i>Sheet heaters.</i>					
	1914	5	138	43.1	.591	Pittsburgh.....	1913	8	209	42.7	1.018
	1915	5	123	43.2	.577		1914	9	234	42.7	1.005
	1917	4	138	43.0	1.210		1915	9	207	42.7	.871
	1919	3	171	43.7	1.180		1917	4	138	44.3	1.970
Total.....	1913	13	336	42.8	.642		1919	5	125	43.7	1.979
	1914	15	399	42.8	.648	Great Lakes and Middle West....	1913	4	98	43.2	.938
	1915	15	353	42.8	.619		1914	5	130	43.0	.895
	1917	8	276	43.7	1.285		1915	5	117	43.2	.862
	1919	8	299	43.7	1.307		1917	4	138	43.0	1.788
<i>Catchers.</i>							1919	3	138	43.7	1.786
Pittsburgh.....	1913	9	231	42.7	.653	Total.....	1913	12	307	42.8	.993
	1914	10	261	42.7	.660		1914	14	364	42.8	.966
	1915	10	227	42.7	.605		1915	14	324	42.9	.868
	1917	4	138	44.3	1.301		1917	8	276	43.7	1.879
	1919	5	124	43.7	1.314		1919	8	263	43.7	1.878
Great Lakes and Middle West....	1913	4	105	43.2	.577						
	1914	5	138	43.1	.591						
	1915	5	123	43.2	.577						
	1917	4	138	43.0	1.210						
	1919	3	227	43.9	1.110						

TABLE 1.—AVERAGE FULL-TIME HOURS PER WEEK AND AVERAGE EARNINGS PER HOUR IN EACH DISTRICT, 1913, 1914, 1915, 1917, AND 1919—Concluded.

Sheet Mills—Concluded.

Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Occupation and district.	Year.	Number of plants.	Number of employees.	Average full-time hours per week.	Average earnings per hour.
<i>Sheet heaters' helpers.</i>						<i>Shearmen's helpers—Concluded.</i>					
Pittsburgh.....	1913	7	170	42.7	\$0.499	Great Lakes and Middle West...	1913	3	50	43.1	\$0.239
	1914	8	195	42.7	.511		1914	4	46	43.2	.344
	1915	8	168	42.7	.487		1915	4	59	43.2	.246
	1917	3	96	43.9	.872		1917	3	66	42.7	.523
	1919	5	68	42.7	1.152		1919	3	111	48.1	.745
Great Lakes and Middle West...	1913	3	60	43.6	.440	Total.....	1913	7	111	42.9	.125
	1914	5	114	43.2	.440		1914	9	128	42.9	.282
	1915	5	107	43.3	.412		1915	9	146	43.8	.242
	1917	3	120	42.7	.848		1917	6	120	43.2	.533
	1919	3	150	43.5	.865		1919	8	171	46.6	.705
Total.....	1913	10	230	42.9	.483	<i>Openers.</i>					
	1914	13	309	42.8	.485	Pittsburgh.....	1913	4	113	42.7	.295
	1915	13	275	42.9	.458		1914	5	135	42.7	.282
	1917	6	216	43.2	.859		1915	5	123	43.7	.270
	1919	8	218	43.2	.955		1917	3	91	43.9	.649
<i>Shearmen.</i>							1919	5	124	43.6	.711
Pittsburgh.....	1913	5	83	42.7	.818	Great Lakes and Middle West...	1913	3	48	43.2	.280
	1914	6	92	42.7	.860		1914	4	65	43.0	.282
	1915	6	75	42.7	.845		1915	4	57	43.2	.280
	1917	4	83	44.1	1.449		1917	3	84	42.7	.676
	1919	5	56	43.8	1.503		1919	2	62	44.8	.632
Great Lakes and Middle West...	1913	3	31	43.4	.805	Total.....	1913	7	161	42.8	.291
	1914	4	44	43.2	.860		1914	9	200	42.8	.282
	1915	4	40	43.5	.792		1915	9	180	43.6	.273
	1917	3	66	42.6	1.336		1917	6	175	43.3	.662
	1919	3	119	43.4	1.550		1919	7	186	44.0	.685
Total.....	1913	8	114	42.9	.814	<i>Laborers.</i>					
	1914	10	136	42.9	.860	Pittsburgh.....	1913	9	256	64.7	.191
	1915	10	115	43.0	.827		1914	10	258	65.8	.192
	1917	7	149	43.5	1.399		1915	10	285	65.0	.192
	1919	8	175	43.5	1.534		1917	4	199	63.2	.321
<i>Shearmen's helpers.</i>							1919	3	81	70.6	.455
Pittsburgh.....	1913	4	61	42.7	.261	Great Lakes and Middle West...	1913	4	95	65.4	.187
	1914	5	82	42.7	.247		1914	5	120	66.4	.180
	1915	5	87	44.2	.238		1915	5	109	65.0	.180
	1917	3	54	43.8	.546		1917	5	457	61.2	.335
	1919	5	60	43.7	.632		1919	3	80	61.5	.466
						Total.....	1913	13	351	64.9	.190
							1914	15	378	65.9	.188
							1915	15	394	65.0	.188
							1917	8	656	61.8	.331
							1919	6	161	66.5	.460

TABLE 2.—RELATIVE FULL-TIME HOURS PER WEEK AND RELATIVE EARNINGS PER HOUR, 1913, 1914, 1915, 1917, AND 1919, BY OCCUPATIONS.

Blast Furnaces.

[1913=100.]

Year.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.
	Stockers.		Bottom fillers.		Top fillers.		Larrymen.		Larrymen's helpers.		Skip operators.		Blowers.	
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914.....	96	98	101	104	99	104	96	99	95	98	96	99	98	100
1915.....	96	98	100	105	97	106	96	97	95	97	96	99	98	101
1917.....	99	154	102	161	103	128	94	151	96	153	93	158	95	146
1919.....	102	242	100	260	94	233	96	238	95	258	96	247	96	226
	Blowing engineers.		Keepers.		Keepers' helpers.		Iron handlers and loaders.		Pig machine men.		Cinder-men.		Laborers.	
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914.....	97	101	97	99	98	99	103	96	97	100	98	96	98	102
1915.....	96	101	97	99	97	98	103	90	97	99	98	95	98	99
1917.....	93	150	94	146	94	157	99	107	95	156	98	156	104	162
1919.....	95	240	98	237	97	253	102	159	98	248	96	258	109	263

Bessemer Converters.

	Stockers		Cupola melters.		Cupola tappers.		Blowers.		Regulators, first.		Regulators, second.		Vesselmen.	
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914.....	96	87	95	77	105	62	101	91	96	68	97	73	96	67
1915.....	96	77	95	89	103	72	101	94	97	73	98	82	97	74
1917.....	95	148	98	150	99	147	101	131	101	130	99	131	107	120
1919.....	110	157	95	200	108	171	100	212	103	174	94	186	104	148
	Vesselmen's helpers.		Cinder pitmen.		Bottom makers.		Bottom maker's helpers.		Ladle liners.		Ladle liners' helpers.		Stopper makers.	
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914.....	96	65	106	94	99	76	99	*88	97	90	97	90	99	83
1915.....	98	73	106	94	99	86	99	94	98	94	98	94	99	87
1917.....	100	124	106	143	98	132	98	148	101	148	101	148	96	143
1919.....	108	162	105	256	88	189	96	233	101	233	101	223	99	208
	Stopper setters.		Steel pourers.		Mold cappers.		Ingot strippers.		Laborers.					
1913.....	100	100	100	100	100	100	100	100	100	100				
1914.....	98	68	94	69	107	68	94	94	98	101				
1915.....	100	76	96	82	107	77	95	99	99	101				
1917.....	96	147	95	133	93	165	98	143	98	155				
1919.....	116	190	105	169	107	176	92	220	95	255				

TABLE 2.—RELATIVE FULL-TIME HOURS PER WEEK AND RELATIVE EARNINGS PER HOUR, 1913, 1914, 1915, 1917, AND 1919, BY OCCUPATIONS—Continued.

Open-Hearth Furnaces.

Year.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.
	Stockers.		Stock cranimen.		Charging-machine operators.		Melters' helpers, first.		Melters' helpers, second.		Melters' helpers, third.		Stopper setters.	
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914.....	99	103	99	100	99	92	98	95	97	95	99	97	97	88
1915.....	99	101	98	106	100	99	98	99	97	100	100	99	97	91
1917.....	100	150	98	142	99	139	99	133	99	136	99	153	97	127
1919.....	97	253	94	231	95	223	91	215	96	230	97	250	94	197
1919.....	96	253	91	242	94	228	91	218	94	233	95	256	92	204
	Steel pourers.		Mold cappers.		Ladle cranimen.		Ingot strippers.		Laborers.					
1913.....	100	100	100	100	100	100	100	100	100	100				
1914.....	99	92	99	91	99	89	100	97	91	100				
1915.....	98	96	97	100	98	96	100	100	93	101				
1917.....	99	126	98	143	99	137	93	149	98	158				
1919.....	93	210	94	232	95	210	89	238	98	248				
1919.....	91	211	.....	.....	93	216	88	241	95	251				

Blooming Mills.

	Pit cranimen.		Heaters.		Heaters' helpers.		Bottom makers.		Bottom makers' helpers.		Roll engineers.		Rollers.	
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914.....	96	97	97	91	97	99	95	101	97	104	96	95	96	98
1915.....	96	102	98	98	96	103	95	106	98	102	95	100	96	99
1917.....	95	148	92	127	81	149	98	135	99	146	93	144	94	130
1919.....	95	220	95	198	100	224	90	227	94	245	91	198	91	193
	Manipulators.		Tablemen.		Shearmen.		Shearmen's helpers.		Laborers.					
1913.....	100	100	100	100	100	100	100	100	100	100				
1914.....	96	91	95	98	97	93	98	96	98	101				
1915.....	97	97	94	102	98	98	99	97	99	101				
1917.....	96	148	94	129	98	141	98	154	102	155				
1919.....	94	215	92	201	94	214	96	224	95	254				

Plate Mills.

	Charging-crane and charging-machine operators.		Heaters.		Heaters' helpers.		Roll engineers.		Rollers.		Screwmen.		Table operators.	
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914.....	99	90	98	94	99	98	97	100	99	93	100	90	99	87
1915.....	99	97	98	99	99	105	96	100	99	97	99	97	99	92
1917.....	100	142	98	137	98	186	98	144	101	134	101	144	100	140
1919.....	101	232	98	220	104	238	100	244	103	171	103	230	104	220
	Hookmen.		Roll hands, other.		Shearmen.		Shearmen's helpers.		Laborers.					
1913.....	100	100	100	100	100	100	100	100	100	100				
1914.....	100	94	98	97	99	98	99	97	99	99				
1915.....	99	100	98	101	99	105	100	104	97	99				
1917.....	102	152	100	151	101	154	100	160	103	168				
1919.....	104	259	103	252	103	237	105	252	100	257				

TABLE 2.—RELATIVE FULL-TIME HOURS PER WEEK AND RELATIVE EARNINGS PER HOUR 1913, 1914, 1915, 1917, AND 1919, BY OCCUPATIONS—Concluded.

Sheet Mills.

Year.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time hours per week.	Relative earnings per hour.
	Pair heaters.		Rollers.		Roughers.		Catchers.		Matchers.		Doublers.		Sheet heaters.	
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914.....	100	99	100	97	100	101	100	101	100	108	100	108	100	97
1915.....	100	95	100	87	100	96	100	95	100	106	100	106	100	87
1917.....	102	191	102	176	102	200	102	200	102	211	102	211	102	189
1919.....	102	194	102	174	102	204	100	188	102	219	102	216	102	189
	Sheet heaters' helpers.		Shearmen.		Shearmen's helpers.		Openers.		Laborers.					
1913.....	100	100	100	100	100	100	100	100	100	100				
1914.....	100	100	100	106	100	112	100	97	102	99				
1915.....	100	95	100	102	102	96	102	94	100	99				
1917.....	101	178	101	172	101	212	101	227	95	174				
1919.....	101	198	101	188	109	281	103	235	102	242				

Basic Rates of Wages in Government Arsenal.

THE following tabulation is a statement of the minimum and maximum basic day rates of wages for the principal occupations in arsenals of the War Department from 1914 to 1919. There are also intermediate rates. When a rate was changed during a year the new rate is stated together with the month in which the change was made.

In the case of pieceworkers the rates shown constitute the guaranteed rates per day. The minimum is not an entrance rate necessarily. The rate at which a man is hired depends on his skill and experience.

The rates do not indicate actual earnings, especially during the war period, when special bonuses were paid and much overtime was worked. The value of the rates is primarily to reflect basic-wage movements in the Federal arsenals.

Under a recent ruling of the War Department the general bonus of \$120 a year from July 1, 1918, to July 1, 1919, and of \$240 a year since July 1, 1919, is held to apply retroactively to employees in the arsenals, and back payments are now being made. Such bonuses are in addition to the rates shown in the table.

During the period the arsenals have had a basic eight-hour day, and time above eight hours has been considered as overtime.

BASIC RATES OF WAGES IN GOVERNMENT ARSENALS, 1914 TO 1919, BY OCCUPATION.

Frankford (Philadelphia, Pa.).

Occupation.	Basic rates of wages in Government arsenals in—					
	1914	1915	1916	1917	1918	1919
Blacksmith.....	\$3.52	\$3.52	\$3.52 1 3.76	\$3.76 2 4.24	\$4.24 3 5.52	\$5.92-\$6.40
Carpenter.....	\$3.00- 3.20	\$3.20- 3.36	\$3.20- 3.36 5 3.24- 3.52	\$3.24- 3.52 6 3.64- 4.12	\$5.92- 6.40 3 6.4- 4.12 3 4.80- 5.20 4 5.36- 5.92	5.36- 5.92
Gauge maker.....	2.76- 4.48	2.76- 4.48	3.24- 4.76	3.76- 5.24	3.76- 5.24 3 4.72- 6.14 4 5.92- 6.88	5.92- 6.88
Tool maker.....	2.76- 4.48	2.76- 4.48	3.24- 4.76	3.76- 5.24	3.76- 5.24 3 4.72- 6.14 4 5.92- 6.88	5.92- 6.88
Electrician.....	3.00	3.00	3.24	3.24 7 3.44- 3.84	3.44- 3.84 3 4.00- 5.04 4 5.04- 5.92	5.04- 5.92
Laborer.....	1.52- 1.76	1.52- 1.76	1.52- 1.76 8 1.52- 2.00	1.52- 2.00 4 1.52- 2.32	1.52- 2.32 3 2.96- 3.44 4 3.20- 3.68	3.20- 3.68
Machinist.....	2.52- 3.00	2.52- 3.00 3 3.00- 3.76	3.00- 3.76 7 3.24- 4.24	3.24- 4.24 6 3.52- 4.24 4 3.52- 4.76	3.52- 4.76 3 4.72- 5.92 4 5.36- 6.40	5.36- 6.40
Machinist's helper.....	2.24	2.24	2.24 1 2.40- 2.52	2.40- 2.52 3 2.40- 2.60 4 2.60- 3.08	2.60- 3.08 3 2.96- 4.24 4 3.44- 4.72	3.44- 4.72
Machine operator (female).	1.16	1.16	1.16 8 1.36	1.36	1.36	.....
Machine operator (male)	1.76	1.76	1.76 3 2.00- 2.24	2.00- 2.24 4 2.00- 2.32	2.00- 2.32 3 2.96- 4.00 4 3.44- 4.56	3.44- 4.56
Millwright.....	3.00	3.00	3.00 5 3.24	3.24 7 3.64	3.64 3 4.80 4 5.36- 5.92	5.36- 5.92
Molder, iron.....	.....	.....	.....	.....	5.76 4 5.92- 6.40	5.92- 6.40
Painter.....	2.60	2.60	2.76 6 3.44	3.44	3.44 3 3.44- 4.56 4 4.32- 5.36	4.32- 5.36
Pattern maker.....	3.44	3.44	3.44 5 3.52	3.52 8 4.00 4 4.70	4.70 3 5.60 4 5.92- 6.40	5.92- 6.40
Plumber.....	3.00	3.00	3.00	3.00 8 3.24 7 3.68	3.68 3 4.00- 5.04 4 5.04- 5.92	5.04- 5.92
Steam fitter.....	2.52	2.52 10 2.76	2.76	2.76 1 3.00 7 3.16	3.16	.....
Tinsmith and sheet-metal workers.	3.00- 3.20	3.00- 3.20 7 3.00- 3.60	3.60	3.60 3 4.00	4.00 3 5.12- 5.44 4 5.52- 5.92	5.52- 5.92
Woodworker, machine..	2.52	2.52	2.52	2.52	2.52 3 3.44 4 4.00	4.00

Rock Island (Rock Island, Ill.).

Blacksmith.....	\$3.00-\$3.75	\$3.25-\$4.00	\$3.50-\$4.00	\$4.00-\$4.50	\$4.00-\$4.50 3 4.40- 5.44 4 5.36- 6.24	\$5.36-\$6.24
Boiler maker.....	4.00	4.00	4.00	4.00	4.00 3 4.72- 5.44 4 5.36- 5.92	5.36- 5.92
Carpenter.....	2.50- 3.25	2.75- 3.50	3.25- 3.75	3.25- 3.75	3.25- 3.75 3 4.00- 5.12 4 4.56- 5.36	5.36- 5.44
Die sinker.....	3.25- 3.75	3.25- 3.75	3.75- 4.25	4.25- 4.50	4.25- 4.50 3 5.76- 6.32 4 6.40- 6.88	6.40- 6.88
Electrician.....	2.75- 3.25	2.75- 3.25	3.00- 3.56	3.00- 5.12	3.00- 5.12 3 4.40- 5.44 4 5.04- 5.92	5.04- 5.92

¹ April.² September.³ May.⁴ November.⁵ June.⁶ July.⁷ October.⁸ December.⁹ March.¹⁰ February.

BASIC RATES OF WAGES IN GOVERNMENT ARSENALS, 1914 TO 1919, BY OCCUPATION—
Continued.*Rock Island (Rock Island, Ill.)—Concluded.*

Occupation.	Basic rates of wages in Government arsenals in—					
	1914	1915	1916	1917	1918	1919
Laborer.....	\$1.25-\$1.85	\$1.25-\$2.00	\$1.25-\$2.25	\$1.75-\$2.50	\$1.75-\$2.50 ¹ 2.80-3.04 ² 3.20-3.68	\$3.20-\$3.68
Millwright.....	2.75	2.75	3.00	3.25	3.25 ¹ 4.00-4.40 ² 4.56-5.04	4.56-5.04
Molder.....	3.00-3.25	3.00-3.25	3.25-3.50	3.25-3.75	3.25-3.75 ¹ 4.00-5.12 ² 4.56-5.92	4.56-5.92
Machinist.....	2.75-3.75	2.75-3.75	3.00-4.00	3.00-4.25	3.00-4.25 ¹ 4.72-5.76 ² 5.36-6.40	5.36-6.40
Machinist's helper.....	2.00-2.25	2.00-2.25	2.00-2.50	2.25-3.00	2.25-3.00 ¹ 3.68-4.00 ² 4.32-4.56	4.32-4.56
Machine operator.....	2.00-2.25	2.00-2.25	2.00-2.50	2.25-3.00	2.25-3.00 ¹ 3.28-4.40 ² 3.44-5.04	3.44-5.04
Painter.....	2.50-3.00	2.50-3.00	2.50-3.00	3.00-3.50	3.00-3.50 ¹ 4.00-4.40 ² 4.56-5.04	5.04-5.60
Pattern maker.....	3.25-3.75	3.25-3.75	3.50-4.00	3.50-4.25	3.50-4.25 ¹ 4.40-5.52 ² 5.36-6.92	5.36-5.92
Plumber.....	3.50	3.50	3.50	3.75	3.75 ¹ 4.00-4.72 ² 4.56-5.92	5.46-6.00
Steam fitter.....	3.00	3.00	3.00-3.25	3.00-3.25	3.00-3.25 ¹ 4.00-4.72 ² 4.56-5.92	4.32-6.00
Sheet-metal worker.....	2.50-3.00	2.50-3.00	2.50-3.00	2.50-3.00	2.50-3.00 ¹ 3.68-5.12 ² 4.32-5.92	4.32-5.92
Tinsmith.....	2.50-3.00	2.50-3.00	2.50-3.00	2.50-3.00	2.50-3.00 ¹ 4.00-4.40 ² 4.32-5.92	4.32-5.92
Toolmaker.....	3.50-4.25	3.50-4.25	3.75-4.50	3.75-4.75	3.75-4.75 ¹ 5.12-6.00 ² 5.92-6.88	5.92-6.88
Gauge maker.....	3.50-4.25	3.50-4.25	3.75-4.50	3.75-4.75	3.75-4.75 ¹ 5.12-6.00 ² 5.92-6.88	5.92-6.88
Woodworker, machine..	2.25-3.25	2.25-3.25	2.25-3.25	2.50-3.50	2.50-3.50 ¹ 3.28-4.40 ² 4.32-5.36	4.56-5.36

Springfield (Springfield, Mass.).

Blacksmith.....	\$2.50-\$3.50	\$2.50-\$3.50	\$2.50-\$3.50	\$2.50-\$3.50 ² 2.80-4.16	\$2.80-\$4.16 ² 4.80-5.70	\$4.80-\$5.70
Carpenter.....	3.25-3.75	3.25-3.75	3.25-3.75	3.25-3.75 ² 3.84-4.40	3.84-4.40 ¹ 4.16-4.80 ² 4.32-5.20	4.32-5.20
Die sinker.....	4.00-4.75	4.00-4.75	4.00-4.75	4.00-4.75 ² 4.64-5.52	4.64-5.52 ¹ 4.72-5.76 ² 5.36-6.40	5.36-6.40
Electrician.....	3.00	3.00	3.00	3.00 ² 3.28-4.40	3.28-4.40 ¹ 3.60-4.80 ² 4.80-5.76	4.80-5.76
Laborer.....	2.00	2.00	2.00	2.00 ² 2.32-2.56	2.32-2.56 ¹ 2.56-2.80 ² 3.20-3.68	3.20-3.68
Millwright.....	3.50	3.50	3.50	3.50 ² 3.60-4.40	3.60-4.40 ¹ 3.92-4.80 ² 4.56-5.36	4.56-5.36
Machinist.....	3.00-3.75	3.00-3.75	3.00-3.75	3.00-3.75 ² 3.60-4.64	3.60-4.64 ¹ 4.72-5.76 ² 5.04-5.92	5.04-5.92
Machine operator.....	2.00-2.60	2.00-2.60	2.00-2.60	2.00-2.60 ² 2.56-3.28	2.56-3.28 ¹ 2.80-3.60 ² 3.44-5.20	3.44-5.20

¹ May.² November.³ December.

BASIC RATES OF WAGES IN GOVERNMENT ARSENALS, 1914 TO 1919, BY OCCUPATION—
Continued.*Springfield (Springfield, Mass.)—Concluded.*

Occupation.	Basic rates of wages in Government arsenals in—					
	1914	1915	1916	1917	1918	1919
Painter.....	\$3.25-\$3.50	\$3.25-\$3.50	\$3.25-\$3.50	\$3.25-\$3.50 ¹ 3.60- 3.84	\$3.60-\$3.84 ² 3.92- 4.16 ³ 4.56- 4.80	\$4.56-\$4.80
Plumber.....	4.00	4.00	4.00	4.00 ¹ 4.16- 4.40	4.16- 4.40 ² 4.56- 4.80 ³ 4.56- 5.20	4.56- 5.20
Steam fitter.....	3.75	3.75	3.75	3.75 ¹ 4.16	4.16 ² 4.56 ³ 5.20	5.20
Tinsmith.....	3.50	3.50	3.50	3.50 ¹ 3.28- 4.16	3.28- 4.16 ² 3.60- 4.56 ³ 4.16- 5.20	4.16- 5.20
Toolmaker.....	3.25- 4.25	3.25- 4.25	3.25- 4.25	3.25- 4.25 ¹ 4.64- 5.20	4.64- 5.20 ² 4.72- 5.76 ³ 5.36- 6.40	5.36- 6.40
Gauge maker.....	3.25- 4.25	3.25- 4.25	3.25- 4.25	3.25- 4.25 ¹ 4.40- 5.52	4.40- 5.52 ² 4.72- 5.76 ³ 5.36- 6.40	5.36- 6.40
Woodworker, machine..	2.50- 3.25	2.50- 3.25	2.50- 3.25	2.50- 3.25 ¹ 3.28- 3.84	3.28- 3.84 ² 3.60- 4.16 ³ 4.16- 4.80	4.16- 4.80

Watertown (Watertown, Mass.).

Blacksmith.....	\$3.04-\$3.52	\$3.04-\$3.52	\$3.04-\$3.52	\$3.12-\$3.84	\$3.12-\$3.84 ² 4.72- 5.76 ³ 5.36- 6.40	\$5.36-\$6.40
Blacksmith, heavy fire.....					6.00- 7.04 ² 6.40- 7.68	6.40- 7.68
Carpenter.....	2.80- 3.28	2.80- 3.28	2.80- 3.28 ⁴ 2.80- 3.44	2.80- 3.44	2.80- 3.44 ² 3.76- 4.80 ³ 4.96- 5.92	4.96- 5.92
Electrician.....	3.04- 3.28 ² 3.04- 3.52	3.04- 3.52	3.04- 3.52 ⁴ 3.28- 3.72 ¹ 3.52- 3.76	3.52- 3.76	3.52- 3.76 ² 4.00- 5.60 ³ 5.36- 6.40	5.36- 6.40
Laborer.....	1.84- 2.24 ² 2.00- 2.24	2.00- 2.24	2.00- 2.24 ⁴ 2.16- 2.32 ¹ 2.16- 2.48	2.16- 2.48 ⁷ 2.24- 2.48	2.24- 2.48 ² 2.72- 3.20 ³ 3.20- 3.68	3.20- 3.68
Millwright.....					4.96- 5.92	4.96- 5.92
Molder.....	3.04- 3.68	3.04- 3.68	3.04- 3.68 ¹ 4.00	4.16	4.16 ² 5.28- 5.76 ³ 5.36- 6.40	5.36- 6.40
Machinist.....	2.80- 3.76	2.80- 3.76	2.80- 3.76 ² 3.12- 4.24	3.12- 4.32	3.12- 4.32 ² 4.72- 5.76 ³ 5.36- 6.40	5.36- 6.40
Machinist's helper.....	1.84- 2.80 ² 2.00- 2.80	2.00- 2.80	2.00- 2.80	2.00- 2.80	2.00- 2.80 ² 2.96- 3.68 ³ 3.44- 4.32	3.44- 4.32
Machine operator.....	2.56	2.56 ² 2.56- 3.04	2.56- 3.04	2.56- 3.04	2.56- 3.04 ² 3.20- 4.40 ³ 4.32- 5.36	4.32- 5.36
Painter.....	2.72- 2.88	2.72- 2.88	2.72- 2.88	2.72- 2.88	2.72- 2.88 ² 3.60- 4.40 ³ 4.32- 5.36	4.32- 5.36
Pattern maker.....	2.80- 4.00	2.80- 4.00	4.00- 4.48	3.84- 4.56	3.84- 4.56 ² 5.20- 6.00 ³ 5.92- 6.88	5.92- 6.88
Plumber.....	3.28	3.28	3.28	3.28	3.28 ² 4.40- 5.76 ³ 5.36- 6.40	5.36- 6.40
Steam fitter.....	4.50	4.50	4.50	4.50	4.50 ² 4.40- 5.76 ³ 5.36- 6.40	5.36- 6.40
Tinsmith.....					4.96	4.96
Toolmaker.....	3.40- 3.68	3.40- 3.68	3.76- 4.80	3.60- 4.88	3.60- 4.88 ² 5.12- 6.00 ³ 5.92- 6.88	5.92- 6.88

¹ December.
² May.³ November.
⁴ July.⁵ March.
⁶ August.⁷ February.
⁸ September.

BASIC RATES OF WAGES IN GOVERNMENT ARSENALS, 1914 TO 1919, BY OCCUPATION—
Concluded.*Watervliet (Watervliet, N. Y.).*

Occupation.	Basic rates of wages in Government arsenals in —					
	1914	1915	1916	1917	1918	1919
Blacksmith.....	\$3.28	\$3.28 ¹ \$3.28- 3.52	\$3.28-\$3.52 ¹ 3.60- 3.92	\$3.60-\$3.92 ² 4.00- 4.72	\$4.00-\$4.72 ³ 3.60- 5.20 ⁴ 4.96- 6.88	\$4.96-\$6.88
Carpenter.....	\$3.04- 3.20	3.04- 3.20 ⁵ 3.28	3.28 ⁵ 3.36- 3.60	3.36- 3.60	3.36- 3.60 ⁶ 3.84 ³ 3.60- 4.56 ⁴ 4.32- 5.92	4.32- 5.92
Electrician.....	2.80- 3.52	2.80- 3.52 ⁵ 3.04- 4.16	3.04- 4.16	3.04- 4.16 ² 3.28- 4.48	3.28- 4.48 ⁴ 4.32- 6.40	4.32- 6.40
Laborer.....	2.00	2.00	2.00 ⁵ 2.24	2.24 ² 2.40	2.40 ³ 2.64- 2.88 ⁴ 3.20- 3.68	3.20- 3.68
Millwright.....					4.00 ³ 3.60- 5.20 ⁴ 4.32- 5.92	4.32- 5.92
Machinist.....	2.56- 4.00	2.56- 4.00 ⁵ 2.80- 4.24	2.80- 4.24 ⁵ 3.12- 4.72	3.12- 4.72 ² 3.28- 4.96 ⁴ 3.28- 5.20	3.28- 5.20 ⁶ 3.76- 5.20 ⁴ 4.72- 5.76 ⁴ 4.96- 6.40	4.96- 6.40
Machinist's helper.....	1.76- 2.00	1.76- 2.00 ⁵ 2.00- 2.24	2.00- 2.24 ⁵ 2.24- 2.72	2.24- 2.72 ² 2.24- 2.88	2.24- 2.88 ³ 2.80- 3.20 ⁴ 3.20- 4.32 ⁶ 3.28- 3.52	3.20- 4.32
Machine operator.....	2.24	2.24 ⁵ 2.72	2.72 ⁵ 3.04	3.04	3.04 ³ 3.28- 4.00 ⁴ 3.68- 5.36 ⁴ 3.68- 5.36	3.68- 5.36
Painter.....					4.72- 4.88	4.96- 6.40
Pattern maker.....	3.20	3.20 ⁵ 3.28	3.28 ⁵ 3.60- 3.76	3.60- 3.76 ² 4.72- 4.88	4.72- 4.88 ⁴ 4.96- 6.40	4.96- 6.40
Plumber.....	3.28	3.28 ⁵ 3.76	3.76 ⁵ 4.16	4.16	4.16 ⁴ 4.96- 6.40	4.96- 6.40
Steam fitter.....	3.28	3.28 ⁵ 3.76	3.76 ⁵ 4.16	4.16	4.16 ⁴ 4.96- 6.40	4.96- 6.40
Tinsmith.....	3.04	3.04 ⁵ 3.28	3.28 ⁵ 3.60	3.60 ² 3.68	3.68 ⁴ 4.96- 6.40	4.96- 6.40
Toolmaker.....	3.52- 4.00	3.52- 4.00 ⁵ 3.76- 4.24	3.76- 4.24 ⁵ 4.16- 4.72	4.16- 4.72 ² 4.32- 4.96 ⁴ 3.76- 5.20	4.16- 5.20 ⁶ 4.72- 5.76 ⁴ 5.36- 6.88	5.36- 6.88

¹ December.
² September.
³ May.

⁴ November.
⁵ December.
⁶ January.

Pay of Enlisted Men in the United States Army.

THE following table is a statement of basic pay in the first enlistment of the grade and occupation named compiled from the Army pay table. It does not include slight additions for continuous years of service in the second, third, and subsequent enlistments. As the first enlistment period is four years and as not over 25 per cent of the enlisted men continue in service, it is a fair statement of possible earnings in the Army. In addition the Army man gets clothing, board, and lodging, or commutation for these items. The pay fixed by the act of May 18, 1917, continues for the period of the war emergency and is therefore still in effect.

MONTHLY PAY OF ENLISTED MEN IN THE UNITED STATES ARMY, 1908 AND 1919,
AND PER CENT OF INCREASE, 1919 OVER 1908.

Title or rank.	Monthly pay, 1908.	Monthly pay, 1919.	Per cent increase 1919 over 1908.
Master electricians.....	\$75.00	\$81.00	8.0
Master signal electricians.....	75.00	81.00	8.0
Engineers.....	65.00	71.00	9.2
Sergeants, first class, hospital corps.....	50.00	56.00	12.0
Regimental sergeant majors.....	45.00	51.00	13.3
Regimental quartermaster sergeants.....	45.00	51.00	13.3
Regimental commissary sergeants.....	45.00	51.00	13.3
Sergeants major, senior grade, coast artillery.....	45.00	51.00	13.3
Battalion sergeants major of engineers.....	45.00	51.00	13.3
Post quartermaster sergeants.....	45.00	51.00	13.3
Post commissary sergeants.....	45.00	51.00	13.3
Post ordnance sergeants.....	45.00	51.00	13.3
Battalion quartermaster sergeants of engineers.....	45.00	51.00	13.3
Electrician sergeants, first class, signal corps.....	45.00	51.00	13.3
First sergeants.....	45.00	51.00	13.3
Battalion sergeant majors, infantry, field artillery.....	40.00	48.00	20.0
Squadron sergeant majors.....	40.00	48.00	20.0
Sergeants major, junior grade, coast artillery.....	40.00	48.00	20.0
Battalion quartermaster sergeants, field artillery.....	40.00	48.00	20.0
Master gunners.....	40.00	48.00	20.0
Electrician sergeants, second class.....	36.00	44.00	22.2
Sergeants of engineers, ordnance, signal corps.....	36.00	44.00	22.2
Quartermaster sergeants of engineers.....	36.00	44.00	22.2
Mess sergeants.....	36.00	44.00	22.2
Color sergeants.....	36.00	44.00	22.2
Sergeants and quartermaster sergeants of cavalry, artillery, infantry.....	30.00	38.00	26.7
Stable sergeants.....	30.00	38.00	26.7
Acting cooks of hospital corps.....	30.00	38.00	26.7
Firemen.....	30.00	38.00	26.7
Cooks.....	30.00	38.00	26.7
Corporals of engineers, ordnance, signal corps, hospital corps.....	24.00	36.00	50.0
Chief mechanics.....	24.00	36.00	50.0
Mechanics, coast artillery.....	24.00	36.00	50.0
Corporals of cavalry, artillery, infantry.....	21.00	36.00	71.4
Mechanics of field artillery.....	21.00	36.00	71.4
Blacksmiths and farriers.....	21.00	36.00	71.4
Saddlers.....	21.00	36.00	71.4
Wagoners.....	21.00	36.00	71.4
Artificers.....	21.00	36.00	71.4
Privates, first class, engineers, ordnance, signal corps.....	18.00	33.00	83.3
Privates, hospital corps.....	16.00	31.00	93.8
Trumpeters.....	15.00	30.00	100.0
Musicians of infantry, artillery, engineers.....	15.00	30.00	100.0
Privates of cavalry, engineers, artillery, infantry, signal corps.....	15.00	30.00	100.0
Privates, second class, engineers, ordnance.....	15.00	30.00	100.0

Wages in the United States Navy.

AS compiled from the Navy Register, 1919, issued by the Navy Department, the rates of pay of the enlisted personnel of the Navy are shown in the following table. The rates of 1914 as fixed by the act of May 13, 1908, represent 10 per cent increases over the scale previously in effect. The rates fixed in 1917 by the act of May 22 of that year consist of increases graduated according to rates in effect at that time, and are operative for at least six months after the termination of the war. The rates are minimum rates and do not show increases due to reenlistment. Enlisted men in the Navy receive food, housing, and clothing in addition to their pay.

RATES OF PAY OF PRINCIPAL GRADES AND OCCUPATIONS IN THE UNITED STATES NAVY.

[The Navy Register, Jan. 1, 1919, pp. 1010, 1011.]

Occupation.	1907	1914 (since act of May 13, 1908).	1919 (since June 1, 1917, act of May 22, 1917.)	Per cent of increase, 1919 over—	
				1907	1914
<i>Seaman branch.</i>					
Chief petty officers:					
Chief masters-at-arms.....	\$65.00	\$71.50	\$77.50	19.2	8.4
Chief turret captains.....	60.00	66.00	72.00	20.0	9.1
Chief mates and quartermasters.....	50.00	55.00	61.00	22.0	10.9
Petty officers, first class:					
Turret captains.....	50.00	55.00	61.00	22.0	10.9
Masters-at-arms, mates, etc.....	40.00	44.00	52.00	30.0	18.2
Petty officers, second class:					
Masters-at-arms, mates, quartermasters.....	35.00	38.50	46.50	32.9	20.8
Petty officers, third class.....	30.00	38.50	46.50	55.0	20.8
Seamen, first class.....	24.00	26.40	34.40	43.3	30.3
Seamen gunners.....	23.00	28.00	34.00	47.8	21.4
Seamen, second class.....	19.00	20.90	35.90	88.9	71.8
<i>Messmen branch.</i>					
Stewards (highest grade).....	60.00	66.00	72.00	20.0	9.1
Stewards and cooks, cabin, etc.....	50.00	55.00	61.00	22.0	10.9
Steorage cooks.....	30.00	33.00	41.00	36.7	24.2
Mess attendants, first class ¹	30.00	33.00	41.00	36.7	24.2
Mess attendants, second class ¹	25.00	27.50	39.50	58.0	43.6
Mess attendants, third class ¹	20.00	22.00	37.00	85.0	68.2
<i>Artificer branch.</i>					
Chief petty officers:					
Special mechanics.....	127.00	139.70	145.70	14.7	4.3
Machinists, mates.....	70.00	77.00	83.00	18.6	7.8
Electricians.....	60.00	66.00	72.00	20.0	9.1
Printers.....	60.00	66.00	72.00	20.0	9.1
Carpenters, mates.....	50.00	55.00	61.00	22.0	10.9
Water tenders.....	50.00	55.00	61.00	22.0	10.9
Storekeepers.....	50.00	55.00	61.00	22.0	10.9
Petty officers, first class:					
Mechanics, first class.....	80.00	88.00	94.00	17.5	6.8
Blacksmiths, first class.....	65.00	71.50	77.50	19.2	8.4
Coppersmiths, first class.....	65.00	71.50	77.50	19.2	8.4
Patternmakers, first class.....	65.00	71.50	77.50	19.2	8.4
Molders, first class.....	65.00	71.50	77.50	19.2	8.4
Boilermakers.....	65.00	71.50	77.50	19.2	8.4
Machinists mates, first class.....	55.00	60.50	66.50	20.9	9.9
Coppersmiths.....	55.00	60.50	66.50	20.9	9.9
Shipfitters, first class.....	55.00	60.50	66.50	20.9	9.9
Electricians, first class.....	50.00	55.00	61.00	22.0	10.9
Blacksmiths.....	50.00	55.00	61.00	22.0	10.9
Plumbers and fitters.....	45.00	49.50	55.50	23.3	12.1
Watertenders.....	45.00	49.50	55.50	23.3	12.1
Engineers, first class.....	45.00	49.50	55.50	23.3	12.1
Painters, first class.....	40.00	44.00	52.00	30.0	18.2
Sailmakers, mates.....	40.00	44.00	52.00	30.0	18.2
Carpenters, mates, first class.....	40.00	44.00	52.00	30.0	18.2
Storekeepers, first class.....	40.00	44.00	52.00	30.0	18.2
Printers, first class.....	40.00	44.00	52.00	30.0	18.2
Petty officers, second class:					
Blacksmiths, second class.....	50.00	55.00	66.00	22.0	10.9
Coppersmiths, second class.....	50.00	55.00	61.00	22.0	10.9
Patternmakers, second class.....	50.00	55.00	61.00	22.0	10.9
Molders, second class.....	50.00	55.00	61.00	22.0	10.9
Machinists, mates, second class.....	45.00	49.50	55.50	23.3	12.1
Electricians, second class.....	40.00	44.00	52.00	30.0	18.2
Shipfitters, second class.....	40.00	44.00	52.00	30.0	18.2
Engineers, second class.....	40.00	44.00	52.00	30.0	18.2
Oilers.....	37.00	40.70	48.70	31.6	19.7
Carpenters, mates, second class.....	35.00	38.50	46.50	32.9	20.8
Printers, second class.....	35.00	38.50	46.50	32.9	20.8
Storekeepers, second class.....	35.00	38.50	46.50	32.9	20.8

Lower rates to noncitizens of United States—\$24, \$20, and \$16, respectively.

RATES OF PAY OF PRINCIPAL GRADES AND OCCUPATIONS IN THE UNITED STATES
NAVY—Concluded.

Occupation.	1907	1914 (since act of May 13, 1908).	1919 (since June 1, 1917, act of May 22, 1917).	Per cent of increase, 1919 over—	
				1907	1914
<i>Artificer branch—Concluded.</i>					
Petty officers, third class:					
Electricians, third class.....	\$30.00	\$33.00	\$41.00	36.7	24.2
Carpenters' mates, third class.....	30.00	33.00	41.00	36.7	24.2
Painters, third class.....	30.00	33.00	41.00	36.7	24.2
Storekeepers, third class.....	30.00	33.00	41.00	36.7	24.2
Seamen, first class:					
Firemen, first class.....	35.00	38.50	46.50	32.9	20.8
Shipwrights.....	25.00	27.50	35.50	42.0	29.1
Seamen, second class:					
Firemen, second class.....	30.00	33.00	41.00	36.7	24.2
Seamen, third class:					
Firemen, third class.....	22.00	24.20	36.20	64.5	49.6
Landsmen.....	16.00	17.60	32.60	103.8	85.2

Rates of Pay in Marine Occupations.

FIVE agreements fixing wages and establishing working rules for certain officers and seamen and other employees on coastwise and deep-sea vessels operated by the United States Shipping Board and the American Steamship Association have recently been announced. The parties to the agreements are the United States Shipping Board, the American Steamship Association, and the following organizations of workers: The Masters', Mates', and Pilots' Association and the Neptune Association; the Marine Engineers' Beneficial Association; the Marine Firemen's, Oilers', and Water Tenders' Union of the Atlantic and Gulf; the Eastern and Gulf Sailors' Association; and the United Radio Telegraphers' Association. These agreements do not apply to the Pacific coast vessels or to the vessels on the Great Lakes.

The agreements affecting the masters, mates, and pilots and the marine engineers became effective on July 28, 1919, and are to continue in force until August 1, 1920; those affecting the firemen, oilers, and water tenders and the seamen became effective "immediately," being signed, respectively, on July 30 and July 28, and terminate May 1, 1920; the agreement affecting radio operators became effective August 1, 1919, and is to continue for one year.

The new rates are shown in the table following, which also gives the rate in effect in specified years prior to the recent awards, the data being taken from records of the United States Shipping Board. These are not actual earnings, nor do they include bonuses effective in the war zone the greater part of 1917 and 1918. Aside from the bonuses, however, these rates will be found to approximate fairly closely to the actual earnings, inasmuch as hiring and payment is by the month, thus making it necessary to account for little lost

time. Comparative data are available only for the licensed trades and for the principal crew occupations of able seamen and firemen. Rates of pay, however, as fixed by the July awards, are given for deck and engine-room crews; also for radio telegraphers.¹

RATE OF WAGES IN MARINE OCCUPATIONS, ATLANTIC AND GULF COAST VESSELS,
IN SPECIFIED YEARS, 1911 TO 1919.^a

Occupation.	1911		1914		1917	
	High.	Low.	High.	Low.	High.	Low.
Deck crew:						
Master (captain).....	\$400	\$225	\$400	\$225	\$400	\$225
First mate.....	150	110	150	110	150	110
Second mate.....	140	100	140	100	140	100
Third mate.....	130	90	130	90	130	90
Fourth mate.....	80		80		80	
Able seaman.....			30	30	60	60
Engine and fire room:						
Chief engineer.....	200	135	200	135	225	150
First assistant engineer.....	125	90	125	90	150	110
Second assistant engineer.....	115	80	115	80	140	100
Third assistant engineer.....	115	70	115	70	130	90
Junior engineer.....	80	70	80	70	80	80
Fireman.....			40	40	60	60

Occupation.	1918		January, 1919.		July, 1919.	
	High.	Low.	High.	Low.	High.	Low.
Deck crew:						
Master (captain).....	b \$450.00 c 375.00	b \$345.50 c 287.50	\$375.00	\$300.00	\$412.50	\$330.00
First mate.....	b 247.50 c 206.25	b 210.00 c 175.00	206.00	181.25	241.25	216.25
Second mate.....	b 225.00 c 187.50	b 187.50 c 156.25	187.50	162.50	212.50	187.50
Third mate.....	b 202.50 c 168.75	b 165.00 c 137.50	168.75	143.75	188.75	163.75
Fourth mate.....	b 180.00 c 150.00	b 172.50 c 143.75	150.00	143.75	165.00	158.75
Able seaman.....	75.00	75.00	75.00	75.00	85.00	85.00
Engine and fire room:						
Chief engineer.....	b 345.00 c 287.50	b 240.00 c 200.00	287.50	212.50	387.50	305.00
First assistant engineer.....	b 247.50 c 206.25	b 210.00 c 175.00	206.25	181.25	241.25	216.25
Second assistant engineer.....	b 225.00 c 187.50	b 187.50 c 156.25	187.50	162.50	212.50	187.50
Third assistant engineer.....	b 202.50 c 168.75	b 165.00 c 137.50	168.75	143.75	168.75	163.75
Junior engineer.....	b 150.00 c 125.00		125.00	125.00	135.00	135.00
Fireman.....	75.00	75.00	75.00	75.00	90.00	90.00

^a Report of the Director of Marine and Dock Industrial Division, United States Shipping Board, Dec. 31, 1918, and subsequent awards, July, 1919.

^b Trans-Atlantic.

^c Coastwise.

¹ Vessels are classified according to their power tonnage (p. t.) into 5 classes, as follows:

Type.	Class A.	Class B.	Class C.	Class D.	Class E.
Twin-screw vessels.....	Over 15,000	15,000 to 9,000	9,000 to 5,500	5,500 to 3,500	Under 3,500
Single-screw vessels.....	Over 20,000	20,000 to 12,000	12,000 to 7,500	7,500 to 5,000	Under 5,000

Power tonnage equals gross tonnage (total cubical capacity of the entire hull, a unit of 100 cubic feet representing a ton) plus the indicated horsepower.

The wage for licensed officers is according to this classification, the column headed "high" in the table indicating the pay on vessels of class A, and the column headed "low" giving the pay on vessels of class E. The wage for deck and engine-room crews is the same for all classes.

The monthly rates of pay as fixed by the July, 1919, awards of the United States Shipping Board for other members of the deck and engine-room crews and for radio telegraphers are as follows:

Deck Crew.

Carpenter.....	\$100. 00
Carpenter's mate.....	95. 00
Boatswain.....	95. 00
Boatswain's mate.....	90. 00
Quartermaster.....	87. 50
Ordinary seaman.....	65. 00
Boys.....	40. 00

Engine-Room Crew.

Electrician.....	110. 00
Refrigerating engineer.....	110. 00
Assistant refrigerating engineer.....	110. 00
Deck engineer.....	100. 00
Pumpman.....	100. 00
Donkeyman.....	95. 00
Storekeeper.....	95. 00
Oiler.....	95. 00
Water tender.....	95. 00
Fireman.....	90. 00
Coal passer and wiper.....	75. 00

Radio Telegraphers.

Chief operator.....	125. 00
Assistant operator.....	100. 00

Comparative Wages of Seamen on American and Foreign Vessels, 1915 to 1919.

A REPORT of an investigation made by the Investigation and Inspection Service¹ of the Department of Labor, to ascertain the relative wages paid to seamen on American vessels sailing out of American ports and the wages paid to seamen on foreign vessels trading in American ports, has recently been published for the use of the Senate Committee on Commerce. The purpose of this report is to show the relative rates prior to the enforcement of the Seamen's Act and the relative wages at the time of the report (that is, in the spring of 1919). Wage rates prior to the year 1918 were taken from statements made to the United States Shipping Board by foreign consuls and verified so far as possible by other sources. The data for 1918 and 1919 were obtained from a most reliable source—the shipping articles of the various ships. In some cases shipowners themselves gave the desired infor-

¹ Having been organized primarily as a war measure, this Service ceased to exist on June 30, 1919.

mation. In every instance a sufficient number of articles were examined so that the rates quoted in the report are typical for the nationality they represent. With respect to the more powerful seafaring nations definiteness in the figures quoted has been facilitated by the fact that these nations almost invariably have established a uniform rate for all vessels sailing under their flag. Two ports were visited—New York and San Francisco. It was not found necessary to visit any others.

The investigation shows that a decided increase took place in seamen's wages everywhere after the enforcement of the Seamen's Act. Whether this increase was due in a larger measure to war conditions or to the change in the status of seamen in American ports in consequence of the Seamen's Act is impossible of certain determination; but both factors contributed to this marked advance in wages. One circumstance, however, must be attributed to the act alone. Seamen's wages have persistently followed the American standard. Unless restricted by governmental authority, European wages at least have inclined toward equalization with the American wage rate, with the result that at the present time seamen's wages are not a deciding factor in competition among shipping nations. It is only in respect of Japanese shipping that this result has not been attained.

On March 4, 1915, Congress passed the Seamen's Act, the main purposes of which were to equalize wages on all ships entering or leaving American ports and to make conditions aboard ship such that Americans would again take to the sea in great numbers.

The increased cost of operation under the American flag has always been regarded as the main obstacle to the upbuilding of our merchant fleet. In this connection the question of seamen's wages is of great importance. About the time of the passage of the Seamen's Act, seamen's wages in New York differed from those in foreign ports as follows: Seamen's wages in New York were about 20 per cent higher than wages paid in Liverpool; about 22.5 per cent higher than in the North Sea or the Atlantic ports on the continent of Europe; about 30 per cent higher than wages paid in the inner Mediterranean or Baltic; about 400 per cent higher than the wages paid in India or China; about 300 per cent higher than wages paid in the ports of Japan.

Everybody agreed that wages had to be equalized, but in what direction? Should Congress follow the old idea of lowering wages to the lower foreign standard? This had caused and would continue to cause our men to abandon the sea. Or should Congress adopt measures to raise the wages of all maritime nations to the higher American standard? The latter course was wisely adopted and soon proved the contentions of its champions.

Monthly Wages of Seamen and Firemen on American and Foreign Vessels.

Beginning July, 1916, the Seamen's Act became operative on all foreign vessels. In the second half of 1915, the year in which the act was passed, wages paid seamen and firemen on ships clearing from New York had been, as far as available, as follows:

WAGES PAID SEAMEN AND FIREMEN ON VESSELS CLEARING FROM NEW YORK IN 1915.

Nationality.	Date.	Seamen.	Firemen.
	1915.		
American.....	June 30.....	¹ \$29.70	² \$39.34
		³ 30.00	³ 40.00
British.....	July.....	30.00	35.00
Dutch.....	November.....	28.20	32.90
Danish.....	December.....	30.00	35.00
Swedish.....	November.....	20.25	⁴ 22.95

¹ 93 ships.

² 90 ships.

³ Union scale.

⁴ \$6.75 bonus on round trip.

In 1916, the year in which the act became operative on all foreign ships, the tendency to pay the American wage immediately became apparent, as the following table illustrates:

WAGES PAID SEAMEN AND FIREMEN ON AMERICAN AND FOREIGN VESSELS IN 1916.

Nationality.	Date.	Seamen.	Firemen.
	1916.		
American.....	June 30.....	¹ \$45.00	¹ \$50.00
	do.....	² 43.88	³ 48.95
British.....	March.....	30.00	35.00
	July.....	45.00	50.00
Dutch.....	do.....	45.00	50.00
Danish.....	June.....	45.00	45.00
	July.....	45.00	50.00
Swedish.....	do.....	20.25	⁴ 22.95
French.....	November.....	19.30	⁵ 25.00

¹ Union scale.

² 93 ships.

³ 92 ships.

⁴ Plus bonus of \$9.45.

⁵ Plus bonus of \$3.86.

The high cost of living and the increased perils of submarine warfare brought about substantial increases in the year 1917 for both seamen and firemen and resulted in their wages being equalized, first on American vessels and later, especially in 1918, on practically all foreign ships as well. In addition to the regular increase in wages American shipowners paid bonuses ranging from 25 per cent to more than 100 per cent. Thus the American rate again led, but foreign rates soon adjusted themselves, so that at the end of 1918 the rates were practically equalized, with the exception of the French. This exception is due to the fact that the French merchant marine is controlled by the French Government and manned through the "in-

scription maritime." The following table shows the continued process of equalization in 1917 and 1918:

WAGES PAID SEAMEN AND FIREMEN ON AMERICAN AND FOREIGN VESSELS IN 1917 AND 1918.

Nationality.	Date.	Seamen.	Firemen.
1917.			
American.....	June 30.....	¹ \$57.58	² \$60.55
	do.....	³ 60.00	³ 60.00
	Aug. 1.....	⁴ 60.00	⁴ 60.00
English.....	April.....	45.00	50.00
	October.....	55.92	58.40
Dutch.....	March.....	65.00	70.00
	do.....	45.00	⁵ 50.00
Danish.....	May.....	⁵ 56.00-60.00	⁵ 60.00
Swedish.....	November.....	20.25	⁶ 22.95
French.....	August.....	21.23	⁷ 27.02
1918.			
American.....	May.....	75.00	⁸ 75.00
British.....	October.....	55.92	⁹ 58.40
Dutch.....	February.....	60.00	60.00
	November.....	70.00	¹⁰ 70.00-75.00
Danish.....	October.....	75.00	75.00
Swedish.....	March.....	20.25	⁶ 22.95
	December.....	75.00	75.00
Norwegian.....	do.....	75.00	75.00
French.....	May.....	27.98	¹⁰ 33.78

¹ 93 ships.

² 92 ships.

³ Union scale.

⁴ Shipping Board scale.

⁵ Plus 50 per cent bonus.

⁶ Plus \$27 bonus.

⁷ Plus \$3.86 bonus.

⁸ Plus 50 per cent bonus in war zone.

⁹ Plus \$14.60 bonus in war zone.

¹⁰ Plus \$2.90 bonus.

The signing of the armistice brought about more definiteness and regularity in the wage rates. Bonuses had varied from month to month and even from ship to ship, depending upon the nature of the cargo and the length of the voyage, as well as the destination. In order to ascertain whether the equalization was artificial or only temporary a survey was made between January 15 and February 15 of wages paid on foreign vessels leaving New York within that time, the result of which was that the American rate seems to have become the standard rate.

The following ships paid the American rate of wages, that is, \$75, for both seamen and firemen: American, Canadian, Danish, Dutch, Norwegian, Russian, Swedish. Belgian ships paid \$70.56 for seamen and \$73 for firemen. One Greek ship paid the flat rate of \$70, while a Spanish ship paid \$40. The French rate had not advanced beyond the rate fixed in May, 1918, namely, \$30.88 for seamen and \$36.68 for firemen. Lowest of all were the rates paid on Japanese ships. Although almost twice as high as those paid on the Pacific, the Atlantic rates were only 40 yen (about \$20) for both seamen and firemen. A tabulation of these figures brings out the results more clearly.

WAGES PAID SEAMEN AND FIREMEN ON AMERICAN AND FOREIGN VESSELS IN
SPRING OF 1919.

Nationality.	Seamen.	Firemen.	Nationality.	Seamen.	Firemen.
American.....	¹ \$75.00	¹ \$75.00	Greek.....	\$70.00	\$70.00
Belgian.....	70.56	² 73.00	Japanese.....	20.00	20.00
British.....	70.00	73.00	Norwegian.....	75.00	75.00
Canadian.....	75.00	75.00	Russian.....	75.00	75.00
Danish.....	75.00	75.00	Swedish ³	75.00	75.00
Dutch.....	75.00	75.00	Spanish.....	40.00	40.00
French.....	30.88	² 36.88			

¹ This rate has since been advanced. See pages 133 and 134 of this issue of the REVIEW.

² Including bonus.

³ Cf. also table on page 146 of this issue of the REVIEW.

A number of Scandinavian ships were paying their seamen and firemen 75 krona (\$20.10) per month. A Norwegian captain who was interrogated explained that this was the rate paid by the Scandinavian ships in Scandinavian ports, but that bonuses had to be added to this, bringing the total pay up to 300 krona, or \$80.40 in American money. Instead of paying the high bonuses they preferred paying the American flat rate of \$75.

In view of the fact that the Seamen's Act was unable to influence French wages greatly on account of the "inscription maritime" exercised by the French Government, it was thought advisable to give the official French wage rate in detail.

A large part of the merchant marine of France was taken over by the French Government immediately after the outbreak of the war, and now the entire merchant marine is controlled by the Government. Whenever the pay on vessels that had not yet been requisitioned advanced the Government immediately met the increase by establishing the same rate on the requisitioned ships, thereby assuring a uniform rate of pay. Thus to-day, as in the American merchant marine, a standard wage prevails throughout the French merchant marine.

A circular of the Ministry of Marine of January 8, 1916,¹ promulgates the new scale of wages going into effect January 1, 1916. This scale, for the crew, is as follows:²

OFFICIAL FRENCH WAGE RATE FOR CREWS, EFFECTIVE JAN. 1, 1916.

Occupation.	Pay.	Bonus (Included).
Boatswain (maitre d'equipage).....	\$27.90	\$4.83
Carpenter (maitre charpentier).....	24.13	4.83
Leading fireman and oiler (1er chauffeur, graisseur).....	27.99	4.83
Coal passer (soutier).....	23.16	3.86
Able seaman (matelots).....	19.30	3.86
Ordinary seaman (novice).....	10.62	3.86
Boys (mousse).....	8.69	3.86
Overtime to be paid on the following bases:		
Boatswain and carpenter (maitres).....		.12
Firemen and oilers (chauffeurs, grasseurs).....		.10
Able seamen and coal passers (matelots, soutiers).....		.08
Ordinary seamen (novices).....		.04
Boys (mousses).....		.04

¹ Comité Central des Armateurs de France, Circulaire No. 965.

² Conversions into United States money are made on the base of 1 franc=19.3 cents.

Toward the end of 1916 the French shipowners granted another increase in wages, effective in November, 1916. A circular of the Minister of Marine ¹ immediately applied the new scale to the requisitioned ships. The scale of November 15, 1916, is as follows:

OFFICIAL FRENCH WAGE RATE FOR CREWS, EFFECTIVE NOV. 15, 1916.

Occupation.	Fixed pay.	Bonus.	Total.
Boatswain (maitre d'equipage).....	\$29.34	\$3.86	\$33.20
Boatswain's mate (second maitre).....	25.09	2.90	27.99
Able seamen (matelots).....	19.30	2.90	22.20
Ordinary seamen (novices).....	11.58	1.16	12.74
Leading firemen and similar grades (1er chauffeurs et assimilés).....	29.34	2.90	32.23
Firemen (chauffeurs).....	25.09	2.90	27.99
Coal passers (soutiers).....	19.30	2.90	22.20

On August 1, 1917, a new rate was put in operation on privately owned ships. On August 26, 1917, another circular of the Ministry of Marine establishing the new rate retroactive to August 1, 1917, on requisitioned ships was issued.

OFFICIAL FRENCH WAGE RATE FOR CREWS, EFFECTIVE AUG. 1, 1917.

Occupation.	Wage.	Increase.	Total.
Boatswain (maitre d'equipage).....	\$31.85	\$4.83	\$36.68
Mates (second maitres).....	26.06	4.83	30.88
Able seamen (matelots).....	21.23	3.86	25.09
Ordinary seamen (novices).....	10.04	3.86	13.80
Boys (mousses).....	7.14	3.86	11.00
Leading firemen and similar grades (1er chauffeurs et assimilés).....	30.30	4.83	35.13
Firemen (chauffeurs).....	27.02	3.86	30.88
Coal passers (soutiers).....	21.23	3.86	25.09

It is important to note that beginning August 1, 1917, a uniform scale has been established throughout the entire French merchant marine. Theretofore wages in the Mediterranean and in the coast-wise trade had been lower than in the ocean trade. On August 29, 1917, another agreement was entered into by the seamen and the ship companies to allow another increase of 15 francs (\$2.90) the next January, which increase was promptly paid. But only a few months later new demands were made and submitted to the supreme court of arbitration for settlement. On June 6, 1918, the decision of the court was rendered granting the demands of the seamen. The new schedule was made retroactive to May 1, 1918, and is as follows:

Occupation.	Wage rate.
Boatswains (maitres d'equipage).....	\$41.495
Carpenters (maitres charpentiers).....	41.495
Chief gunner (?) (capitaine d'armes).....	41.495
Leading firemen (1er chauffeurs).....	41.495
Oilers (graisseurs).....	41.495

¹ Comité Central des Armateurs de France, Circulaire No. 1054.

Occupation.	Wage rate.
Boatswain's mates (second maitres).....	\$38. 60
Carpenters' mates (charpentier).....	38. 60
Able seamen (matelots).....	30. 88
Ordinary seamen (novices).....	17. 37
Boys (mousses).....	14. 475
Firemen (chauffeurs).....	36. 67
Coal passers (soutiers).....	30. 88

An examination of the ship's articles of a number of French vessels clearing New York as recently as March, 1919, showed that the rate of May 1, 1918, was still in force. Though the French wages are not even one-half the prevailing American rate, the increase has, nevertheless, been about 100 per cent since the beginning of the war. The comparatively low rate of pay in the French merchant marine is probably due in a large measure to the semimilitary character of French seamen. It is worthy of note, however, that the French delegates to the international seafarers' conference at London in February, 1919, supported the movement to establish a universal wage for seamen and firemen of \$75.

Wages Paid Japanese, Chinese, Lascar, and Malay Seamen and Firemen.

It has been demonstrated that the tendency toward equalization of seamen's wages in the merchant marines of the European nations and of the United States had to a great extent removed the unequal conditions under which American vessels were operating in the Atlantic. In the Pacific the change has been much less marked. The reasons are mainly racial differences and unequal standards of living of oriental crews as compared with white crews.

While crews in the Atlantic usually consist of whites only and include besides Americans many of European nationalities, crews in the Pacific are largely oriental, and in the case of Japanese ships are composed entirely of Japanese. Some British vessels have mixed crews of white and Chinese or Lascars. But crews on Japanese ships are strictly Japanese.

It is hardly necessary to elaborate on the inequality of living standards between whites and orientals, be they Japanese, Chinese, or Lascars. We often hear of American standards being higher than European. This difference, such as it is, usually disappears when contact between the two is once established. The result is adjustment of standards and aspirations. No such contact is established between the whites and the orientals. Therefore no adjustment is likely to take place.

The importance of race and of living standards and its direct bearing on seamen's wages, particularly at this time, is borne out very strikingly by resolutions adopted at the international seafarer's conference in London last February (1919), where a universal seamen's basic wage was advocated and an appeal was made to the shipping interests of the world to adopt the American wage standard, thereby eliminating the wage question from international competition.

The cleavage between European and American wage rates has practically been bridged over, but a chasm still separates Japanese, Chinese, Lascar, and Malay wages from all others. Of course, the war and the general increase of wages everywhere has not left oriental wages untouched. Although one Japanese steamship company in 1918 paid bonuses to its crews amounting to their earnings for the entire year, yet their wages plus these bonuses brought their pay only near the French scale, which is about the lowest paid in Europe.

Japanese Wages.

Japanese wages are not so easily presented as European and American because of the peculiar and exaggerated subdivision of Japanese crews as far as pay is concerned. On American ships able seamen get \$75, ordinary seamen \$55, and deck boys \$40 per month. In other words, you have three categories, the members of each getting \$75, \$55, or \$40, respectively. A Japanese pay roll, on the other hand, presents a scale such as this: 5 first sailors—4 at 25 yen,¹ 1 at 24 yen; 6 second sailors—3 at 23 yen, 3 at 22 yen; 8 third sailors, 20 yen; and fourth sailors—4 at 19 yen, 3 at 17 yen, 1 at 15 yen; 3 deck boys, 5 yen.

An individual average wage could be figured out from the above scale. But the number of men in each category, as well as the amount paid to the various groups, are by no means the same on any two ships or on the same ship for two consecutive years. Furthermore, the data received were not always obtainable in such detailed form. If, therefore, in the following table, able seamen are quoted as receiving \$8.25 to \$10.25, this denoted the highest and the lowest wage paid to able seamen, implying that the scale is graduated between these two amounts. The following schedule illustrates the slow increase in the last five years as well as the low level of Japanese wages to-day:

MONTHLY WAGES PAID SEAMEN AND FIREMEN ON A JAPANESE VESSEL SAILING FROM SAN FRANCISCO, 1913, 1914, 1917, AND 1918.

Date.	Sailors.	Firemen.
December, 1913.....	\$8.25-\$10.25	\$8.50-\$10.50
January, 1914.....	8.25- 11.00	8.50- 11.40
February, 1917.....	8.50- 11.50	9.75- 12.00
December, 1918.....	7.50- 12.50	7.50- 13.00

¹ 1 yen=49.85 cents. Treasury Department Circular, No. 1, Oct. 1, 1919.

The hundred per cent bonus mentioned on page 142 was paid on this vessel in 1918. This means that the highest-paid seaman on this particular ship, which is one of the largest in the Pacific trade, received about \$26, or less than American seamen received before the war. But this bonus was paid by the company during a very lucrative year on their own volition and not because of any agreement to do so.

The next table shows the lack of uniformity in the wage rates on four typical Japanese vessels and a comparison with the corresponding American rates for the same rating. Besides seamen and firemen other grades are added in order to make the comparison stronger. The rates are exclusive of any bonus that was paid during 1918.

WAGE SCALE ON FOUR TYPICAL JAPANESE STEAMERS IN THE PACIFIC TRADE COMPARED WITH PRESENT-DAY (MAY, 1919) AMERICAN RATES.

Rank.	6,368 net tons.	6,101 net tons.	2,960 net tons.	2,680 net tons.	American rates. ¹
Deck crew:					
Boatswain.....	\$21.00	\$19.00	\$20.00	\$15.00	\$85.00
Boatswain's mate.....	15.50	16.00			80.00
Carpenter.....	18.50	16.00	17.00	17.50	90.00
Carpenter's mate.....	12.50	13.50			85.00
Quartermaster.....	14.00	13.50-15.00	15.50-17.00	15.00	77.50
Able seamen.....	12.00-12.50	7.50-12.50	9.50-14.50	8.50-15.00	75.00
Ordinary seamen.....					55.00
Dock boy.....	2.50	2.50	3.50	2.50	40.00
Engine room:					
No. 1 oiler.....	14.50	20.00	20.00	13.50-14.50	80.00
No. 2 oiler.....	13.50	14.00-16.00	15.50-16.00		
Water tender.....	15.00-15.50	15.50		15.00	80.00
Storekeeper.....	14.50	14.00	17.00		80.00
Fireman.....	11.00-13.00	11.50-13.00	13.00-15.00	11.00-13.00	75.00
Coal passer.....	7.50-10.50	7.50-10.50	12.25-12.50	8.00-10.50	65.00
Apprentice coal passer.....	2.50	2.50		2.50	

¹ These rates have since been advanced. See pp. 133 to 135 of this issue of the REVIEW.

Chinese Wages.

The nationalities hitherto mentioned in this report on seamen's wages, American, Belgian, British, Danish, French, Greek, Japanese, Dutch, Norwegian, Russian, Swedish, and Spanish, are all represented in American ports by the flag of the merchant marine of their respective countries. Three types of seamen presently to be discussed are not so represented. They are the Chinese, Lascar, and Malay crews.

Chinese seamen may be found on ships of various flags. The British, perhaps, employ them more than other nations, but they were found on American ships in the past and are at this time employed regularly by a Chinese-owned American corporation on the Pacific coast whose vessels fly the American flag.

Before substituting its Chinese crews by whites after the passage of the Seamen's Act, the Pacific Mail Steamship Co. in 1915 was paying its Chinese, on an average, as follows:

WAGES PAID CHINESE SEAMEN AND FIREMEN PER MONTH ON SHIPS OF THE PACIFIC MAIL STEAMSHIP CO. IN 1915.

Rank.	Mexican dollars. ¹	American equivalent.
Seamen	7.50	\$3.30
Firemen	8.00	3.52

¹ The Mexican dollar is figured at \$0.44 American.

To-day the China Mail Steamship Co., the corporation mentioned above, is paying its Chinese seamen and firemen a comparatively much higher rate. Chinese crews in the Pacific trade are usually paid off in Mexican silver dollars, the exchange value of which is very high at this time (May, 1919). The present scale follows:

WAGES PAID CHINESE SEAMEN AND FIREMEN PER MONTH ON SHIPS OF THE CHINA MAIL STEAMSHIP CO. IN 1919.

Rank.	Mexican dollars. ¹	American equivalent
Seamen	20.00	\$15.70
Firemen	20.00	15.70

¹ \$1 Mexican equals \$0.785 American.

The China Mail Steamship Co. is engaged in the trans-Pacific trade. Its rates, however, do not indicate any standard wage paid Chinese seamen in the Pacific, except as far as its own crews are concerned. British ships, for instance, pay their Chinese on a different scale, usually considerably higher, but by no means uniform. The articles of three British ships clearing from New York showed one ship paying Chinese seamen \$29.20, another \$29 to its seamen and \$31 to its firemen, while the third paid its seamen and firemen, \$39.13.

The articles of other British vessels with mixed crews seem to indicate that 29 Shanghai dollars ¹ is the rate usually paid to Chinese seamen and 31 (Shanghai) dollars to firemen. Thus, it may be presumed that the following scale is reasonably representative for British ships:

WAGES PAID CHINESE SEAMEN AND FIREMEN PER MONTH ON BRITISH SHIPS IN 1919.

Rank.	Shanghai dollars.	American equivalent.
Seamen	29.00	\$31.41
Firemen	31.00	33.58

Instead of \$29 (Shanghai) (\$31.41) the flat rate of £6 (\$29.20) is sometimes paid on British articles. This represents almost the same value. It is approximately one-half of what the British seamen and

¹ Shanghai dollar equals \$1.0332.

firemen were getting before the £3 (\$14.60) bonus was added to their wage in October, 1918. The latter have been working persistently for the elimination of the Chinaman from British ships. Their efforts in this direction have been checked by war-time necessities, but may be resumed with the signing of peace.

Lascar and Malay Wages.

Besides Chinamen crews on British vessels often contain large numbers of Lascars and Malays. Their wages are extremely low. The following figures were obtained by examining the articles of seven British ships with Lascar crews clearing from New York:

Wages paid Lascar seamen and firemen per month on British ships in 1919.

Rank:

Seamen.....	\$5. 93
Firemen.....	6. 16

Lascars are paid in Indian rupees. While the seamen are graduated in many subdivisions like the Japanese, their average wage being \$5.93, the firemen get a flat rate of \$6.16. This represents the actual pay received in Asiatic waters. While in the Atlantic these same crews receive just double this amount.

Malay crews were found on three British ships. Two were paid the same rate in Shanghai dollars, the other was paid in Singapore dollars.¹

WAGES PAID MALAY CREWS PER MONTH ON 2 BRITISH SHIPS, 1919.

Rank.	Shanghai dollars. ¹	American equivalent.
Seamen.....	29.00	\$31.41
Firemen.....	31.00	33.58

¹ \$1 Shanghai equals \$1.0832 American.

The third ship paid its Malay seamen 22 and its firemen 19 Singapore dollars or \$12.50 and \$10.79 American currency, respectively.

New Agreement Regarding Wages of Seamen in Sweden.

ACCORDING to a report of the consul at Stockholm, Sweden, under date of July 11, 1919, a new agreement recently made between the "local" skippers and seamen abolishes all bonus payments and fixes the wages as shown in the table which follows. The agreement stipulates eight hours as a day's work, with overtime rates per hour as follows: For lumbermen and boatmen, 39 cents; sailors, 36 cents; able-bodied seamen, 33½ cents; ordinary seamen, 27 cents. The agreement is in effect from July 9, 1919, to the end of 1920.

¹ Singapore dollar equals \$0.5678.

MONTHLY WAGES OF SWEDISH SEAMEN CLASSIFIED BY SIZE OF VESSEL.

Tonnage of ships. ¹	Lumbermen.	Boatsmen.	Sailors.	Able-bodied seamen.	Ordinary seamen.
Under 700.....	\$72.36	\$72.36	\$67.00	\$48.24	² \$36.18
700 to 3,000.....	80.40	80.40	74.76	48.24	² \$1.71
Over 3,000.....	85.76	85.76	79.73	48.24	.....

¹This is metric tons. A metric ton is equivalent to 0.98421 long ton or 1.102 short tons.

²With 12 months' duty; with less than 12 months' duty, \$20.10.

Average Weekly Earnings in New York Factories, Compared with Retail Food Prices.

THE table following, prepared by the Bureau of Statistics and Information of the New York State Industrial Commission, brings into comparison the change in the course of average weekly earnings in the State of New York with the change in the course of retail prices of food in the United States.

The figures relating to earnings are collected and published currently by the State bureau, and food price figures are derived from prices collected and published currently by the United States Bureau of Labor Statistics.

In the table here presented, the food price in June, 1914, is taken as the base or 100, so that comparison may be made with the earnings that are first available for that month. In the index numbers for retail prices of food as published by the United States Bureau of Labor Statistics, the average price for the year 1913 is taken as the base, or 100.

COMPARISON OF COURSE OF AVERAGE WEEKLY EARNINGS IN NEW YORK STATE FACTORIES WITH COURSE OF RETAIL FOOD PRICES IN THE UNITED STATES.

[The figures are indexes with June, 1914, as 100.]

Month.	1914		1915		1916		1917		1918		1919	
	Average weekly earnings, New York factories.	Retail food prices in U. S.	Average weekly earnings, New York factories.	Retail food prices in U. S.	Average weekly earnings, New York factories.	Retail food prices in U. S.	Average weekly earnings, New York factories.	Retail food prices in U. S.	Average weekly earnings, New York factories.	Retail food prices in U. S.	Average weekly earnings, New York factories.	Retail food prices in U. S.
January.....	.....	.....	98	104	107	108	120	129	¹ 132	162	181	187
February.....	.....	.....	98	102	108	107	121	134	139	163	174	174
March.....	.....	.....	100	99	110	108	124	134	147	156	175	177
April.....	.....	.....	99	100	111	110	122	146	152	156	174	184
May.....	.....	.....	100	101	112	110	127	153	157	160	175	187
June.....	100	100	101	101	113	113	128	154	161	164	177	186
July.....	99	103	100	101	111	112	127	147	164	169	182	192
August.....	99	108	102	101	114	114	129	151	167	173	188	194
September.....	98	108	101	102	117	119	134	155	176	180	.....	.....
October.....	97	106	105	104	118	122	136	159	176	183	.....	.....
November.....	97	106	106	105	119	127	139	157	² 170	185	.....	.....
December.....	99	106	106	106	122	127	139	159	183	189	.....	.....
Average for year.....	98	105	101	102	114	115	129	147	160	170	.....	.....

¹ Drop in January, 1918, was due to Fuel Administrator's closing order for January, 18-22.

² Drop in November, 1918, was due to closing of factories on November 11, Armistice Day.

Rates of Pay of Policemen in 24 Cities.

THE annual salaries of the principal grades in the police forces of various cities are shown in the following table which has been compiled from records in the office of the Commissioners of the District of Columbia:

RATES OF PAY OF PRINCIPAL GRADES IN POLICE FORCES IN 24 CITIES OF THE UNITED STATES.

Cities.	Inspect- ors.	Captains.	Lieuten- ants.	Ser- geants.	Privates.	
					En- trance.	Maxi- mum.
Boston, Mass.....	\$3,300	\$3,000	\$2,000	\$1,800	\$1,100	\$1,600
Bridgeport, Conn.....	2,500	2,500	2,250	2,000	1,500	1,750
Buffalo, N. Y.....	2,472	2,280	1,800		1,500	1,500
Chicago, Ill.....		3,300	2,500	2,200	1,440	1,800
Cincinnati, Ohio.....	2,700		2,000	1,700	1,500	1,500
Cleveland, Ohio.....	2,750	2,541	1,848	1,733	1,280	1,560
Detroit, Mich.....	2,500		2,100	1,850	1,500	1,700
Indianapolis, Ind.....	2,520	2,088	1,800	1,580		
Jersey City, N. J.....	4,000	3,000			1,400	1,600
Los Angeles, Calif.....		{ 2,426 2,700 }	1,800	1,500	1,200	1,440
Milwaukee, Wis.....			2,020	1,720	1,220	1,460
New York, N. Y.....	3,900	3,120	2,450	1,950	1,200	1,650
Newark, N. J.....	4,000	3,000	2,200	1,900	1,400	1,600
Oakland, Calif.....			1,800	1,650	1,200	1,344
Philadelphia, Pa.....			1,900			
Pittsburgh, Pa.....			1,900	1,650	1,410	1,500
Providence, R. I.....				1,588		
San Francisco, Calif.....		2,640	2,360	1,920	1,680	1,680
Seattle, Wash.....		2,220	1,980	1,740	1,440	1,620
St. Louis, Mo.....	2,500	2,400		1,800	1,200	1,500
Washington, D. C.....	1 2,000	1 2,000	1 1,600	1 1,400	1 1,080	1 1,320
Yonkers, N. Y.....		2,750	2,200	1,650	1,550	1,550
Youngstown, Ohio.....		2,220	2,040	1,980	1,620	1,800

¹ To this rate should be added the bonus of \$240 paid to Government employees.

Night Work in English Bakeries.

IN February, 1917, the Food Controller of Great Britain issued a bread order which prohibited, among other things, the sale of bread less than 12 hours old. The general purpose was to lessen the consumption of bread by making it less palatable, but one of the by-results was a diminution of night work in baking. In fact, night work in baking almost disappeared. When after the armistice food control was relaxed the bakery employees were exceedingly unwilling to go back to night work. The employers were disposed to insist on the resumption of the old hours, and after much negotiation, when a strike seemed imminent, the Government interposed and appointed a committee "to inquire into the practice of night work in the bread baking and flour confectionery trade, and to report whether it is desirable in the interests of those engaged in the trade and of the community that the practice should be abolished or modified." This committee has recently issued a report.¹

¹ Great Britain. Ministry of Labor. Report of the committee of inquiry into night work in the bread baking and flour confectionery trade. London, 1919. 44 pp.

They find that night work in the baking trade has existed for at least a hundred years in some parts of England, but that it is much more prevalent in London than elsewhere. Night work is defined as work beginning earlier than 4 a. m. In the spring of 1919 roughly about 60,000 men were engaged as "operative bakers and confectioners employed for hire," of whom about 50 per cent belonged to unions. The unions have for years been trying to end night work, and a number of bills prohibiting it have been brought into Parliament, the earliest in 1848, but none ever progressed as far as a second reading. In September, 1918, a Whitley Council for the baking trade was formed, embracing England, Scotland, and Wales, which took up as one of the first matters to be considered the modification or abolition of night baking. Unfortunately, before any decision was reached, the English employers withdrew from the council, and though the Scottish Master Bakers, the Cooperative Union, and the employees' representatives remained, they did not feel that any scheme which they might devise without the cooperation of the English Master Bakers would have any prospect of general adoption. Consequently, the unions began to handle the dispute directly and the situation arose which led to the appointment of the committee.

The committee finds no evidence that night work in bakeries is injurious to health. They feel, however, that its social effects are bad, and on that ground are opposed to it. They find also that since the factory laws forbid the employment of young persons under 18 at night, boys can not begin their apprenticeship to the baking trade at an age when the apprentice's wage will satisfy them, and that therefore the supply of trained workers tends to fall. Also, they find that the workers themselves are strongly opposed to night work, and they feel that their wishes should carry weight, unless it can be shown that such work is in the interest of the community as a whole.

The chief argument in favor of night work seems to be based on the matter of distribution of bread from the large bakeries. The baker who makes his own bread to sell over his own counter would not be affected by its prohibition, since the law proposed would apply only to employees. The baker who employs a small number of men would probably set his dough himself so that it would be ready for the workers at 5 or 6 o'clock in the morning, and it would be ready for distribution by 9 o'clock at the latest, which would meet the demands of his trade. These two classes would be little, if at all, affected by the proposed legislation, but the large baker would be seriously handicapped. Unless the shops he supplies can have fresh bread on sale early, they are at a disadvantage, and trade tends to go to their competitors. But to get it on sale early, it must be ready to leave the wholesale bakery by 8 o'clock at the latest, which is impossible

unless night work is permitted. The representatives of these bakers were emphatic in their protests against any legislation interfering with night baking.

"The effect of this proposed legislation would tend to the loss of the capital involved, with the inevitable result that large bakeries would be obliged to close down, the baking of bread in general would drift back to the old-fashioned method of handling in smaller bakeries, and there would be a resultant retrograde step in its not being as hygienic and economical. * * * This step, I have not a shadow of doubt in my own mind, will tend to decentralize the business and bring it down to the small bakers again instead of the large ones."

Against this argument, the workers pointed out that night work is exceptional in Scotland, and that as the wholesalers have found it practicable to get along there without it, the English wholesalers could probably do the same. It is admitted that the method of distribution would have to be somewhat reorganized, but this should present no insuperable difficulties. The committee can not find any evidence that the abolition of night work will generally add to the cost of manufacture, "whilst owing to the better supervision exercised on day shifts, a larger output per worker may be obtained."

The committee strongly recommends that wherever possible night work shall be abolished by agreement between employer and employee, but as it is improbable that such agreements could be obtained throughout the whole industry it recommends legislation making it unlawful to employ any person in the manufacture of bread or pastry between the hours of 11 p. m. and 5 a. m. Doughmen and oven firemen and their assistants who must necessarily begin their work a few hours before the regular force comes on are excepted from this prohibition, and careful provision is made to cover any emergencies or exceptional circumstances. Finally, in order to prevent any hardship which might arise from too sudden a change, it is recommended that such legislation shall not become effective until two years from its date of passage.

This report was very far from satisfying the workers. They attempted negotiations with the employers, enlarging their demands to include an increase of wages, a decrease of hours to 44 weekly, and the abolition of night work, and on August 2 struck to secure these terms. The strike was badly managed, and roused much opposition on the part of the public. The Ministry of Labor promised if the men would return to work to introduce a bill against night work along the lines of the committee's report, and on the 10th of August the men voted to return to work, leaving the questions of hours and wages to be settled by arbitration.

Wages, Hours, and Unemployment in 1918 in Denmark.¹

MORE than a normal number of laborers were idle during 1918. This was a necessary result of the restricted operations of the various industries due to fuel shortage and dearth of materials. Unemployment has been greatest in the building trades and among textile, tobacco, and iron workers. The number of unemployed in December was approximately 63,000; this was 10,000 more than at any time of the previous year. The unemployed have been cared for by a system of unemployment pay. The amount of this pay varies under different circumstances, but averages about \$10 or \$12 per week. The payment of the allowance is hedged about with certain restrictions, but, in effect, it can be drawn by any actual laborer who is not employed. The allowance is sufficient to enable its recipient to live fairly comfortably; in fact, it is greater than the wages obtained by many of the laborers before the war.

There was a steady increase in wages during the war; in the various industries wages have been increased on an average of about 53 per cent, and wages for farm laborers have increased 50 to 70 per cent. These increases have been accompanied by a shortening of the working-day in practically all the industries. The close of the year witnessed a strong demand on the part of all laborers for the establishment of an eight-hour day. Strikes were threatened, but the demands were submitted to the negotiation of committees representing the employees and employers, and an amicable settlement is expected, though final agreement has not yet been reached. An eight-hour day was granted employees engaged in Government service; this applies to all persons in the service of the post office, telegraph and telephones, customs, and State railways. Similar concessions have been granted the employees of the city of Copenhagen, effective April 1, 1919.

In this connection it may be of interest to note that the total number of laborers of all kinds in Denmark is about 255,000, and that the average working-day has heretofore been nine and one-half hours. The working-day, of course, varied in different trades, the farm laborers having the longest day. In 1918, 15 per cent of the laborers had a working-day of more than 10 hours; 27.8 per cent, 10 hours; 33.6 per cent, 9½ hours; 14.5 per cent, 9 hours; 4.3 per cent, 8½ hours; 3.6 per cent, 8 hours; and 1.2 per cent, less than 8 hours.

¹ From report, dated Apr. 28, 1919, of the United States consul at Copenhagen to the Department of Commerce, published in Supplement to Commerce Reports for July 31, 1919, Washington.

Wages in Japan.

Wages in the Yokkaichi District.

THE American consul at Yokkaichi, Japan, under date of April 17, 1919, has furnished, through the State Department, a table of wages prevailing in various occupations in that district, 1913 to 1917, inclusive, and during the first six months of 1918. It will be noted that in 1918, so far as given, the rates represent a substantial increase over the average in 1917, whose figures show a similar gain over those for 1916. No statement is made as to the number of hours worked per day or per week for the wages given

AVERAGE DAILY WAGES PAID IN YOKKAICHI DISTRICT, JAPAN, 1913 TO 1918.¹

Class of labor.	Sex.	Average wages in—					
		1913	1914	1915	1916	1917	First half of 1918.
Blacksmith.....	Male....	\$0.30	\$0.29	\$0.30	\$0.34	\$0.43	\$0.50
Bricklayer.....	Male....	.51	.48	.45	.51	.65	.....
Bricklayer's helper.....	Male....	.36	.35	.30	.34	.37	.....
Brickmaker.....	Male....	.39	.31	.33	.43	.48	.....
Brickmaker.....	Female..	.20	.21	.20	.26	.29	.....
Cabinetmaker.....	Male....	.38	.31	.33	.37	.41	.....
Car maker.....	Male....	.29	.31	.24	.36	.44	.57
Carpenter.....	Male....	.45	.43	.40	.42	.45	.....
Clock maker.....	Male....	.31	.29	.27	.34	.37	.44
Clock maker.....	Female..	.13	.12	.10	.12	.13	.....
Clock case maker.....	Male....	.30	.26	.24	.24	.36	.40
Cloisonne maker.....	Male....	.36	.34	.36	.44	.48	.....
Cloisonne maker.....	Female..	.12	.12	.12	.15	.16	.....
Confectioner.....	Male....	2 3.60	2 3.60	2 3.60	2 3.60	2 4.25	2 5.67
Cooper.....	Male....	.35	.34	.32	.34	.42	.53
Cotton spinner.....	Male....	3 27	3 28	3 31	3 16	3 35	3 42
Cotton spinner.....	Female..	3 15	3 15	3 16	3 15	3 19	3 23
Cotton whipper.....	Male....	.35	.33	.31	.32	.33	.....
Cotton whipper.....	Female..	.19	.19	.17	.20	.21	.....
Doors, screens, etc., maker of.....	Male....	.41	.36	.33	.36	.36	.53
Dyer.....	Male....	4 38	4 26	4 26	4 26	4 28	4 33
Embroiderer.....	Male....	.38	.34	.32	.38	.44	.48
Embroiderer.....	Female..	.13	.13	.13	.15	.23	.35
Fan folder.....	Male....	.30	.23	.25	.29	.32	.36
Fan folder.....	Female..	.17	.12	.12	.14	.14	.17
Farm labor.....	Male....	4 28	4 28	4 28	4 30	4 34	.....
Farm labor.....	Female..	4 18	4 18	4 18	4 20	4 23	.....
Farm labor (yearly contract).....	Male....	5 27.50	5 27.50	5 27.50	5 32.50	5 45.20	.....
Farm labor (yearly contract).....	Female..	5 17.50	5 17.50	5 17.50	5 22.50	5 25.00	.....
Flour maker.....	Male....	6 9.16	6 9.16	6 9.29	6 10.12	6 10.75	.....
Founder.....	Male....	.32	.31	.31	.36	.45	.56
Glassmaker.....	Male....	2 7.16	2 7.16	2 7.66	2 8.83	2 10.50	2 10.83
Goldsmith.....	Male....	6 9.00	6 8.10	6 8.75	6 9.15	6 10.68	6 11.70
Harness maker.....	Male....	.26	.26	.26	.26	.26	.....
Harness maker.....	Female..	.11	.11	.11	.11	.11	.....
Jinriksha maker.....	Male....	.35	.35	.35	.36	.41	.46
Laborer, common.....	Male....	.36	.35	.30	.45	.45	.....
Laborer, day.....	Male....	.35	.35	.35	.37	.38	.....
Lacquerer.....	Male....	.30	.27	.26	.38	.48	.75
Lacquer juice-extractor.....	Male....	.33	.33	.33	.33	.37	.....
Mat maker.....	Male....	.45	.41	.40	.41	.45	.....
Watchmaker.....	Male....	.16	.16	.17	.18	.20	.29
Match maker.....	Female..	.12	.09	.11	.11	.13	.16
Oil presser.....	Male....	.30	.29	.28	.32	.38	.....
Oil presser.....	Female..	.15	.12	.12	.14	.16	.....
Painter.....	Male....	.41	.40	.34	.31	.34	.40
Paper hanger.....	Male....	.45	.45	.45	.45	.46	.....

¹ Compiled from local sources.² Monthly; with board.³ With dinner.⁴ With board.⁵ Yearly; with board.⁶ Monthly.

AVERAGE DAILY WAGES PAID IN YOKKAICHI DISTRICT, JAPAN, 1913 TO 1918.—Concluded.

Class of labor.	Sex.	Average wages in—					First half of 1918.
		1913	1914	1915	1916	1917	
Paper lantern maker.....	Male.....	.32	.29	.34	.25	.37	.70
Paper lantern maker.....	Female.....	.21	.23	.23	.18	.24	.30
Plasterer.....	Male.....	.50	.49	.45	.47	.49	.....
Porcelain and earthenware painter.....	Male.....	.30	.28	.27	.34	.41	.49
Porcelain and earthenware painter.....	Female.....	.13	.12	.13	.16	.21	.27
Potter.....	Male.....	.39	.38	.36	.38	.45	.50
Potter.....	Female.....	.17	.16	.15	.17	.20	.21
Pouch maker.....	Male.....	.36	.34	.34	.35	.45	.....
Pouch maker.....	Female.....	.14	.12	.12	.11	.18	.....
Printer.....	Male.....	.35	.33	.33	.35	.35	.....
Printer, hand.....	Male.....	¹ 8.83	¹ 8.83	¹ 8.83	¹ 8.83	¹ 9.50	¹ 12.16
Roof thatcher, board.....	Male.....	.45	.49	.45	.51	.57	.....
Roof thatcher, tile.....	Male.....	.68	.68	.68	.68	.74	.....
Sake maker.....	Male.....	² 6.66	² 6.66	² 7.50	² 7.50	² 7.50	.....
Sawyer.....	Male.....	.46	.43	.43	.47	.57	.....
Servant.....	Male.....	² 1.33	² 1.41	² 1.75	² 2.19	² 2.94	.....
Servant.....	Female.....	² 1.66	² 1.71	² 2.00	² 2.02	² 2.54	.....
Shipwright.....	Male.....	.44	.41	.37	.37	.45	.....
Shoemaker.....	Male.....	.45	.44	.40	.40	.62	.....
Silk spinner.....	Female.....	.15	.13	.15	.15	.19	.....
Silkworm raising.....	Male.....	.18	.18	.24	.24	.33	.....
Silkworm raising.....	Female.....	.12	.13	.11	.12	.16	.....
Soy maker.....	Male.....	.20	.20	.20	.20	.21	.....
Soy maker.....	Female.....	.09	.08	.09	.09	.09	.....
Stonemason.....	Male.....	.51	.51	.50	.55	.59	.....
Tailor (foreign clothes).....	Male.....	.65	.46	.44	.45	.49	.62
Tailor (Japanese clothes).....	Female.....	.36	.35	.36	.40	.40	.....
Tinplate ware maker.....	Male.....	.40	.40	.35	.35	.41	.....
Tobacco cutter.....	(⁴).....	.39	.38	.40	.40	.42	.45
Tobacco roller.....	(⁴).....	.16	.20	.20	.20	.22	.22
Weaver (coarse goods).....	Male.....	.20	.20	.21	.23	.25	.33
Weaver (coarse goods).....	Female.....	.16	.15	.16	.19	.23	.31
Weaver (fine goods).....	Male.....	.27	.29	.29	.31	.36	.38
Weaver (fine goods).....	Female.....	.16	.15	.15	.18	.24	.22
Well digger.....	Male.....	.55	.55	.55	.55	.55	.....
Well digger's helper.....	Male.....	.42	.42	.42	.42	.42	.....
Wooden clog maker.....	Male.....	.31	.26	.31	.34	.31	.....

¹ Monthly.² Monthly; with board.³ With board.⁴ Sex not given.⁵ With dinner.

Wages in an Engineering Works in Yokohama.

HOURLY wages paid to certain classes of workers in an engineering works in Yokohama, 1914 to 1918, inclusive, are presented in the following table published in the Labor Gazette (London) for July, 1919 (p. 277):

WAGES PAID IN ENGINEERING WORKS IN YOKOHAMA, 1914 TO 1918, INCLUSIVE.

Occupation.	Average rate of wages per hour.				Per cent of increase, 1918 over 1914.
	1914 and 1915	1916	1917	1918	
Pattern makers:	Cents.	Cents.	Cents.	Cents.	
Ordinary men.....	6.1	6.6	7.1	7.6	25
Best men.....	8.1	8.6	9.6	11.7	44
Carpenters:					
Ordinary men.....	6.1	6.6	7.1	7.6	25
Best men.....	7.1	8.1	8.6	11.2	57
Molders:					
Ordinary men.....	.....	6.6	7.1	8.1	33
Best men.....	7.6	8.1	10.1	11.7	53

WAGES PAID IN ENGINEERING WORKS IN YOKOHAMA, 1914 TO 1918, INCLUSIVE—
Concluded.

Occupation.	Average rate of wages per hour.				Per cent of increase, 1918 over 1914.
	1914 and 1915	1916	1917	1918	
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	
Machinists and fitters:					
Ordinary men.....	5.1	5.6	6.6	7.6	50
Best men.....	8.1	8.6	9.6	11.7	44
Boiler makers:					
Ordinary men.....	6.1	6.6	7.1	7.6	25
Best men.....	8.1	8.6	9.1	11.2	38
Blacksmiths:					
Ordinary men.....	6.1	7.1	7.6	8.1	33
Best men.....	10.1	10.6	11.2	12.7	25
Unskilled labor:					
Ordinary coolie.....	4.1	4.1	4.6	5.1	25
Best coolie.....	5.1	5.1	5.6	6.1	20

It is stated that these are rates for work done during a nine-hour day, but that overtime, payable at the rate of time and a quarter, is now being regularly worked, with the result that average monthly earnings have increased much more than would appear from the table. The rate of increase, calculated on monthly earnings, ranges from 60 to 150 per cent. The report states that with the increase in the wages has come a decline in the quality of labor available, the places of men leaving employment being filled with men who have not the technical knowledge of their predecessors.

Recent Collective Agreements and Wage Awards
in Germany.

Compiled by ALFRED MAYLANDER.

AS THE Bureau of Labor Statistics is continually receiving inquiries as to current wages in European countries, the wage schedules and hours of labor fixed during the first five months of 1919 in Germany for various occupations in a number of collective agreements and arbitration awards have been compiled here in a table. Reports on wage movements in the German daily press and in trade journals have been used as source for this compilation.

Compared with prewar wage rates in Germany the wages shown in the table below seem very high. When, however, it is considered how much the money value and, consequently, also the purchasing power of the mark have fallen—the par value of the mark is 23.8 cents, but at the time this article is being written it is quoted at 4 $\frac{3}{4}$ cents in the New York money market—and how much the cost of all necessities of life (food, clothing, fuel, etc.) has increased in Germany during the war, one must come to the conclu-

sion that, in spite of his present relatively high wages, the German worker is now much worse situated, economically, than he was in pre-war times. The principal material gain secured by him consists in shorter hours of labor. The 8-hour day has been established by law in Germany, and a number of recent collective agreements grant a week of even less than 48 hours by providing for an 8-hour day from Monday to Friday and a 6 or 6½ hour day on Saturday. In addition to shorter hours of labor, a number of the collective agreements included in the table provide for annual leave with pay, a privilege very rarely granted to workers in prewar times.

There seems to be a strong tendency among German organized labor to abolish piecework, several of the collective agreements recently concluded containing clauses prohibiting piecework. Those agreements which allow piecework practically guarantee to pieceworkers higher wages than to workers employed at time rates. All recent agreements and arbitration awards stipulate extra pay for overtime and Sunday work.

Owing to the greatly unsettled condition of German exchange the wage rates are quoted in the table in marks without conversion into the equivalent in American money. Conversion at the par value of the mark would convey a misleading impression as to the value of German wages and the quotation of marks in the New York money market fluctuates too much from week to week to permit of its use for purposes of computations in a statistical table.

WAGE RATES, HOURS OF LABOR, ETC., FIXED BY COLLECTIVE AGREEMENTS AND ARBITRATION AWARDS IN GERMANY DURING THE FIRST FIVE MONTHS OF 1919.

Industry group, occupation, and locality.	Rate of wages per hour.	Hours of labor.	Method by which scale was fixed.	Duration of award or agreement.		Remarks.	Source.
				From—	To—		
Dye works (Berlin):	Marks.						
Dyers, washers, and cleaners (males).....	1.80						
Laborers.....	1.35	46 per week	(Collective agreement between Textile Employers' Association and the German Textile Workers' Union.)			(All piecework rates are to be 100 per cent higher than the rates of the summer of 1914. Where this increase has already been granted a further 10 per cent is to be paid. Where higher rates were in force than those agreed upon the males are to receive an increase of 10 pfennigs and females of 5 pfennigs per hour.	Vorwärts. Berlin, May 4, 1919.
Ironers and cleaners (females).....	1.20	(8 hours per day, 6 hours on Saturday).		Jan. 17, 1919	July 31, 1919		
Female workers in wet rooms.....	.60						
Other female workers.....	1.00						
Repairs.....	.85						
Boys under 17 years.....	1.40						
Girls under 17 years.....	0.60 to .80						
Girls under 17 years.....	.40 to .60						
Carpet factories (Berlin):							
Weavers (males).....	1.60						
Weavers (females).....	1.00						
Warpers.....	1.40	do.....	do.....	Feb. 4, 1919	May 31, 1919		Do.
Spoolers and sewers (females).....	.90						
Embroidery factories (Berlin):							
Embroiderers (males) at Lever machines.....	1.50						
Embroiderers (females) at Lever machines.....	1.35						
Embroiderers (females) at Singer machines.....	1.20						
Tracers (females).....	1.00						
Ironers (females).....	.75						
Hand embroiderers.....	1.00	do.....	do.....	Mar. 4, 1919	Oct. 15, 1919	Where these rates or more are already paid, 10 per cent increase is to be added. Time lost in waiting for work and material is to be compensated with 80 per cent of the time rates. In piecework the rates shown here are to be guaranteed as minimum rates. For home work the same rates are to be in force as for work done at the factory.	Do.
Schiff and hand machine embroiderers.....	1.50						
Sewers, fitters, threaders, etc.....	.75						
Cornely embroiderers (females).....	1.20						
Bead crocheters.....	1.10						
Hemstitchers.....	.95						
Unskilled juvenile workers.....	.50 to .60						
Hosiery mills (Berlin):							
Male knitters, weavers, and circular frame workers.....	1.90	do.....	do.....	Mar. 20, 1919	June 30, 1919		Do.
Female knitters.....	1.35						
Other female operatives.....	.90						

Building trades (Berlin): Bricklayers and carpenters..... Helpers..... Excavators..... Boys..... Women.....	2.60 2.20 2.10 1.95 1.70	46½ per week (8 hours per day 6½ hours on Satur- day).	Award of arbitration board of Berlin Industrial Court.	Not given; effective June 1, 1919.	Not given.....	{ For overtime 25 per cent extra and for Sunday and night work 50 per cent extra. For tools, workmen are to receive 20 pfennigs a day as compen- sation.	Vossische Zel- tung, Ber- lin, Apr. 25- 1919.
Building trades (Munich): Technical employees: Under 24 years of age, initial salary. Under 24 years of age, after 2 years' service. Over 24 years of age, initial salary. Over 24 years of age, maxi- mum salary. Highly skilled technicians, initial salary. Highly skilled technicians, maximum after 10 years.	\$ 200.00 \$ 240.00 \$ 210.00 \$ 270.00 \$ 310.00 \$ 420.00	45 per week....	Collective agree- ment between the German Techni- cians' Union and the Association of Technico - In- dustrial Employ- ees, and the Em- ployers' Associa- tion of the Munich Building Trades.	Not given; retroactive to Apr. 1, 1919.	Mar. 31, 1920...	{ A high-cost-of-living bonus of 120 marks a month shall be added to all salaries. After 1 year's service, 6 days' leave shall be granted; after 2 years, 9; after 3 years, 12; and after 5 years, 18.	Münchner Neueste Nachrichten. Munich, May 21, 1919.
Stonemasons and stonecutters (Ber- lin): Stonemasons..... Stonecutters, letter cutters, and turners..... Stonecutters, beginners— First half year..... Second half year..... Third half year..... Female workers— First half year..... Second half year..... Third half year.....	2.60 2.40 1.70 1.85 2.00 .90 1.20 1.40	48 per week (maximum), 8 hours per day.	Collective agreement between employ- ers' organization and the Stonecut- ters' Union of Ber- lin.	Apr. 1, 1919	Aug. 1, 1919....	{ Piecework in all branches is abolished. Subcontracting is prohibited. Overtime to be compensated by an addition of 30 per cent to ordinary pay. Working hours are to end half an hour earlier on Saturdays and on the chief public holidays at noon, without deduction from wages. For work outside the district 6 marks ad- ditional per day is to be granted, including Sundays, and fares are to be refunded. Working hours lost through rainy weather shall be paid for.	Vorwärts, Ber- lin, Apr. 17, 1919.
Pavers (Berlin): Pavers..... Rammer men and stonecutters..	2.50 2.40	Not given.....	Award of Industrial Court of Berlin.	do.....			Vorwärts, Ber- lin, Apr. 22, 1919.
Saddlers (Berlin): Skilled saddlers, cutters, ma- chine sewers. All other saddlers over 20 years of age. All other saddlers under 20 years of age. Leather backstitchers (females). Other machine operators (fe- males).	1 2.50 1 2.20 1 1.80 1 3.10 1 1.10	47 per week (8 hours per day, 7 hours on Satur- day).	Collective agreement between the Em- ployers' Associa- tion and the Sad- dlers' Union.			{ Time and one-third is to be paid for necessary overtime and Sunday work.	Vorwärts. Berlin, Mar. 26, 1919.

* Per month.

* Per week.

1 Minimum rate.

WAGE RATES, HOURS OF LABOR, ETC., FIXED BY COLLECTIVE AGREEMENTS AND ARBITRATION AWARDS IN GERMANY DURING THE FIRST FIVE MONTHS OF 1919—Continued.

Industry group, occupation, and locality.	Rate of wages per hour.	Hours of labor.	Method by which scale was fixed.	Duration of award or agreement.		Remarks.	Source.
				From—	To—		
Glaziers (Berlin):	<i>Marks.</i>						
Skilled glaziers.....	2.50	47 per week....	Collective agreement.	Mar. 27, 1919.	Mar. 31, 1920.	Piecework is prohibited. From 6 marks upwards extra pay for all work involving sleeping away from home. Fares are to be compensated for and time spent in traveling is to be counted as working hours. Present weekly wages are to be raised by 12.50 marks for male and 7.50 marks for female workers. The minimum wages stipulated in the award are to be paid, even in cases where the increases of 12.50 marks for men and 7.50 marks for women do not bring the wages to the required standard. Overtime is to be paid for at the rate of time and a quarter, and Sunday work at the rate of time and a half.	Vorwärts. Berlin, Apr. 7, 1919.
Skilled glaziers, first year after apprenticeship.....	2.25						
Flour mill workers (Germany):							
Roller men.....	187.00	Not given.....	{ Award of the arbitration board of the industrial court.	{ Feb. 16, 1919.	Not given.....	In addition to the hourly wages skilled men are to receive a weekly bonus of 10 marks, semiskilled men of 7.50 marks, and women of 5 marks. Foremen are to get 5 marks a week more than the wages of the best paid skilled men, and forewomen 5 marks a week more than the wages of the most experienced female workers. Overtime on week days is to be paid for at the rate of time and a quarter; on Sundays at the rate of time and a half. There is to be an increase of 10 per cent for piecework, computed on the basic wage plus bonus. Annual leave with pay is to be granted for from 3 to 12 days, according to length of service.	Vorwärts. Berlin, Feb. 17, 1919.
Millers.....	175.00						
Grain-elevator workers.....	172.00						
Sack men.....	175.00						
Engineers and firemen.....	190.00						
Boiler cleaners and coal shifters.....	175.00						
Skilled artisans.....	190.00						
Woman workers.....	142.00						
Macaroni factories (Germany):							
Skilled men.....	31.18 to \$1.45do.....	Collective agreement.	May 7, 1919.do.....		Vorwärts. Berlin, May 16, 1919.
Semiskilled men.....	2.03 to \$1.27						
Women.....	2.53 to \$1.81						

Bakers (Munich): Journeyman— First year after apprenticeship. After first year. Mixers. Ovenmen.	1 60.00 1 68.00 1 74.00 1 80.00	According to legal regulations.	Award of the conciliation board of the industrial court.	Not given.	.....do.....	München Neueste Nachrichten. Munich, May 23, 1919.
	1 60.00 1 70.00	9½ on Saturdays, 4 on Sundays, 8½ on other days.	Collective agreement between the Association of Boss Barbers and Hairdressers of Greater Berlin and the Journeymen Barbers' and Hairdressers' Union.	May 20, 1919.	Sept. 30, 1919.	Vorwärts. Berlin, May 21, 1919.
	1 50.00 1 60.00 1 70.00	After 1 year's employment as assistants. After 2 years' employment as assistants. After 3 years' employment as assistants.	Collective agreement between the South German Photographers Association and the National Association of Lithographers, Lithographic Printers, and Allied Trades.	Apr. 1, 1919.	Apr. 1, 1921.	München Neueste Nachrichten. Munich, May 13, 1919.
Photographers (Bavaria): Male and female assistants— First year. Second year. Third year. After third year. Special workers. Apprentices.	1 45.00 1 56.00 1 63.00 1 70.00 1 90.00 1 6.00 to 15.00	8 per day.	Collective agreement of the Union of Hanoover-Linden Millinery Establishments and the Tailors' Union as representatives of the millinery workers.	Mar. 1, 1919.	Dec. 31, 1919.	Konfektionär. Berlin, May 8, 1919.
	1 70.00 1 80.00 1 90.00 1 100.00 1 110.00 1 125.00 1 160.00 1 200.00 1 10.00 to 40.00	18 per week.	Collective agreement of the Union of Hanoover-Linden Millinery Establishments and the Tailors' Union as representatives of the millinery workers.	Mar. 1, 1919.	Dec. 31, 1919.	Konfektionär. Berlin, May 8, 1919.
	1 70.00 1 80.00 1 90.00 1 100.00 1 110.00 1 125.00 1 160.00 1 200.00 1 10.00 to 40.00	18 per week.	Collective agreement of the Union of Hanoover-Linden Millinery Establishments and the Tailors' Union as representatives of the millinery workers.	Mar. 1, 1919.	Dec. 31, 1919.	Konfektionär. Berlin, May 8, 1919.
Milliners (Hanover): Female millinery workers, after finishing apprenticeship— First year. Second year. Third year. First forewoman. Trimmer. First independent trimmer. Apprentices.	1 70.00 1 80.00 1 90.00 1 110.00 1 125.00 1 160.00 1 200.00 1 10.00 to 40.00	18 per week.	Collective agreement of the Union of Hanoover-Linden Millinery Establishments and the Tailors' Union as representatives of the millinery workers.	Mar. 1, 1919.	Dec. 31, 1919.	Konfektionär. Berlin, May 8, 1919.

• In Germany every journeyman barber (*friseur*) has also learned hairdressing and wigmaking.
• Per month, minimum rate.

Per week; minimum rate.

Minimum rate.

Maximum rate.

WAGE RATES, HOURS OF LABOR, ETC., FIXED BY COLLECTIVE AGREEMENTS AND ARBITRATION AWARDS IN GERMANY DURING THE FIRST FIVE MONTHS OF 1919—Concluded.

Industry group, occupation, and locality.	Rate of wages per hour.	Hours of labor.	Method by which scale was fixed.	Duration of award or agreement.		Remarks.	Source.
				From—	To—		
Warehousemen, teamsters, packers, etc. (Greater Berlin):	<i>Marks.</i>						
Boys of 14 to 18 years.....	1 45. 00						
Boys of 14 to 18 years, after six months' service.....	1 50. 00						
Youths of over 18 to 20 years.....	1 60. 00	48 per week. On days preceding Sunday and holidays work is to stop two hours earlier than the usual time.	Collective agreement of the German Transport Workers' Union with the Association of Hardware Merchants.	Not given....	Not given.....	{Time and a quarter is to be paid for overtime, and time and a half for Sunday work.	Vorwärts. Berlin, May 20, 1919.
Youths of over 18 to 20 years, after six months' service.....	1 70. 00						
Male workers over 20 years.....	1 85. 00						
Male workers over 20 years, after six months' service.....	1 90. 00						
Teamsters.....	1 95. 00						
Teamsters after six months' service.....	1 100. 00						
Female workers under 20 years.....	(²)						
Female workers over 20 years.....	(³)						
Omnibus conductors, drivers, etc. (Berlin):							
Motormen—							
Initial wages.....	4 350. 00						
After 2 years' service.....	4 380. 00						
After 5 years' service.....	4 370. 00						
After 8 years' service.....	4 380. 00						
After 11 years' service.....	4 390. 00						
After 15 years' service.....	4 400. 00						
Drivers—							
Initial wages.....	4 300. 00						
After 2 years' service.....	4 310. 00						
After 5 years' service.....	4 320. 00						
After 8 years' service.....	4 330. 00						
After 11 years' service.....	4 340. 00						
After 15 years' service.....	4 350. 00						
Conductors—							
Initial wages.....	4 260. 00						
After 2 years' service.....	4 270. 00						
After 5 years' service.....	4 280. 00						
After 10 years' service.....	4 290. 00						
After 15 years' service.....	4 300. 00						
Stable and garage workers.....	4 300. 00						
		8 hours per day	(Collective agreement of the Berlin General Omnibus Co. and the Transport Workers' Union.	Jan. 1, 1919	.....do.....		{Vorwärts. Berlin, Jan. 16, 1919.

¹ Per week.

² 20 per cent less than males of same age.

³ 25 per cent less than males of same age.

⁴ Per month.

Wages, Output, and Cost of Production in German Coal Mines.

AN ARTICLE in *Wirtschaftsdienst*¹ by Dr. Alfred Schmidt, of Essen, contains data on wages and output per worker and shift in German coal mines before, during, and after the war. He calls attention to the fact that the curtailment of working hours, especially the introduction of the 8-hour day, has had the same result as an increase of wages, quite apart from the actual rise which has taken place. The miners, moreover, are not satisfied with having obtained the 8-hour day. A conference of miners' delegates held at Castrop discussed minutely the question of the length of shifts, and finally adopted unanimously the following resolution:

We hold that a uniform regulation of shifts, as demanded by the Miners' Federation, is indispensable. Through the fault of a number of pit managers, who do not adhere to the agreement with respect to the hours of labor, some of the miners in the Ruhr district have 7½-hour shifts, while others have an 8-hour shift. The delegates expect, therefore, that the National Government, conceding the demand made by the Miners' Federation, will enact that on and after April 1, 1919, the shift shall be 7½ hours "bank to bank" for every worker employed below ground. A shorter working day, however, will not be feasible, unless it be adopted simultaneously in every coal-mining country. Consequently, the delegates condemn the action of those miners who have exacted 7-hour or even 6-hour shifts, since the sole result of such action will be to cripple German industry in its competition with foreign industry and to bring about an economic collapse. With equal decisiveness the delegates demand from the National Government that it shall endeavor to procure the insertion of a provision in the peace treaty to the effect that in all the countries to which it applies the daily shifts of underground miners shall be reduced to 7 hours, as from January 1, 1920, and to 6 hours, as from January 1, 1921.

If this demand were granted it would amount to a further increase of wages.

The reports of a few large mining companies give further details concerning the increase of miners' wages and its results. The following table shows the average daily net wage as stated by the Arenburg Mining Co. in Essen:²

AVERAGE DAILY NET WAGE, 1914, 1917, 1918.

Occupation.	July, 1914.	Dec., 1917.	Dec., 1918.
	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>
Cap-rock workers.....	6.73	11.90	16.23
Coal hewers.....	6.63	12.21	14.67
All miners.....	5.29	9.02	11.23

¹ *Wirtschaftsdienst*. Berlin, March 28, 1919.

² The par value of the mark is 23.8 cents. Owing to fluctuations in exchange value from week to week, conversions into United States money are not made in this article.

The average daily output per worker and shift amounted in 1917 to 1.030 metric tons (1.014 long tons) and in 1918 to 1.026 metric tons (1.010 long tons); up to and including October it was 1.052 metric tons (1.035 long tons), but it fell in November to 0.924 ton (0.909 long ton), and in December as low as 0.780 ton (0.768 long ton).

The Consolidated Mining Co. in Gelsenkirchen computes the wages paid per metric ton of coal output at 6.29 marks in July, 1914, 11.68 marks in December, 1917, and 17.56 marks in December, 1918, an increase as compared with 1917 of 179.17 per cent.

The figures given by the Mühlheim Mining Association, which are reproduced in the following table are particularly instructive. They show that since July, 1918, the large increase in wages has been accompanied by a heavy falling off of output per worker and shift, which, if the data furnished by the company are correct, has so increased the cost of production per ton that in January, 1919, the company suffered a loss of 5.96 marks on each ton sold.

MÜHLHEIM MINING ASSOCIATION'S COST OF PRODUCTION OF COAL, 1914 TO 1919.

Item.	1914	1915	1916	1917	1918	1919
Daily output in metric tons ¹	5,009	4,972	3,510	2,728	2,988	2,473
Wages per metric ton of output, in marks ²	5.81	5.68	11.46	14.69	16.77	22.21
Output per worker and shift in metric tons ¹	0.93	0.95	0.89	0.74	0.74	0.66
Cost of timber and material per metric ton ¹						
of output, in marks ²	1.46	1.52	4.62	4.74	6.36	5.86
Cost of production per metric ton, ¹ in marks ²	9.78	9.38	21.25	27.28	31.34	41.40
Average sale proceeds per metric ton ¹ in marks ²	12.54	11.06	22.08	24.47	24.43	35.44
Profit per metric ton ¹ in marks ²	2.76	1.68	0.83			
Loss per metric ton ¹ in marks ²				2.81	6.91	5.96

¹ The metric ton is equivalent to 0.98421 long ton.

² The par value of the mark is 23.8 cents. Owing to fluctuations in exchange value from week to week, conversions into United States money are not made in this article.

MINIMUM WAGE.

New Minimum Wage for District of Columbia Mercantile Industry.

IN THE August number of the MONTHLY LABOR REVIEW (pp. 197-200) an account is given of an award by the District of Columbia Minimum Wage Board, establishing a minimum wage of \$16.50 for women in the mercantile industry. This award has since been given effect by the following order (M. W. B. Order No. 3), dated August 29, 1919, effective October 28, 1919:

Minimum Wage Board of the District of Columbia.

TO WHOM IT MAY CONCERN:

TAKE NOTICE: That, pursuant to the authority in it vested by act of Congress (Public, No. 215, 65th Cong.) and after public hearing held in Washington, D. C., on Friday, August 29, 1919, The Minimum Wage Board of the District of Columbia does hereby order that—

1. No person, firm, association, or corporation shall employ an experienced woman or minor in the mercantile industry at a weekly wage of less than \$16.50.

2. A woman shall be considered experienced who has been employed in the mercantile industry for seven months. A minor shall be considered experienced who has been employed in the mercantile industry for one year.

3. The weekly wage for learners may be less than the wage for experienced workers provided that—

(a) Learners, male or female, entering employment under 18 years of age shall be paid a weekly wage of not less than \$10 for the first five months of employment, of not less than \$12.50 for the next three months of employment, of not less than \$14.50 for the following four months of employment, and thereafter shall be considered experienced workers and shall be paid not less than \$16.50. A minor girl, who, upon reaching the age of 18 years, is still a learner shall be paid not less than the rates specified for adult learners.

(b) Women learners shall be paid a weekly wage of not less than \$12.50 for the first three months of employment, of not less than \$14.50 for the following four months of employment, and thereafter shall be considered experienced workers, and shall be paid not less than \$16.50.

(c) All learners shall be registered with the board not later than one week from the date their employment begins and it shall be the duty of the employer to require a certificate of such registration, and the learner shall apply in person to the board for such certificate. For the period prior to the receipt of this certificate the learner shall be paid not less than the rate for the wage group in which he or she belongs.

4. All women and minors employed in the mercantile industry at the time this order becomes effective shall be rated and paid in accordance with their period of employment at rates not less than those specified for such period in sections 3a and 3b.

5. The term "mercantile industry" shall include all establishments operated for the purpose of trade in the purchase or sale of any goods or merchandise.

6. The term "learner" as used in this order means a woman or minor to whom the board has issued a certificate to work for less than the legal minimum wage in consideration of such person being provided with reasonable facilities for learning the mercantile industry. Learners' certificates will be withheld by the board when it is convinced that the establishment by which the learner is to be employed is endeavoring to evade this order by dismissing learners when they are entitled to an increase in pay.

This order shall become effective 60 days from date hereof, to wit October 28, 1919.

NOTICE: Your attention is respectfully called to the following sections of Public No. 215, Sixty-fifth Congress:

Whoever violates this act shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than \$25 nor more than \$100, or by imprisonment for not less than 10 days nor more than three months, or by both such fine and imprisonment. (Sec. 18.)

Every employer affected by this order shall keep a copy thereof posted in a conspicuous place in each room in his establishment in which women workers are employed. (Sec. 12.)

The term "woman" includes only a woman of 18 years of age or over; the term "minor" means a person of either sex under the age of 18 years. (Sec. 1.)

COOPERATION.

International Cooperative Congresses.¹

ONE of the tendencies of the cooperative movement has been toward federalization and consolidation among the various forms of cooperative societies within each country. The movement to extend this principle to other countries was begun as early as 1885, and culminated in the establishment, in 1892, of the International Cooperative Alliance. Since that time nine Congresses of the International Alliance have been held: London, 1895; Paris, 1896; Delft, 1897; Paris, 1900; Manchester, 1902; Budapest, 1904; Cremona, 1907; Hamburg, 1910; and Glasgow, 1913. At the Glasgow Congress it was planned that a tenth congress should be held at Basel, Switzerland, in 1916, but this was prevented by the war, since the constitution of the International Cooperative Alliance would not permit it to function without representation of all its members, including those from the enemy countries. Recently, however, steps have been taken, through two cooperative congresses held at Paris in February and June of this year, toward the resumption of the work of the alliance.

Early Congresses.

The early congresses of the International Cooperative Alliance were largely devoted to matters of organization and principle. Originally membership in the alliance was open to societies and individuals interested in and working for cooperation in any form. In 1902 however, membership was denied to individuals except as representatives of countries in which cooperation had no organized form.

Cooperative agricultural production, cooperative housing, and educative and propaganda work in the principles of cooperation are some of the subjects discussed at the congresses. The subject of the establishment of commercial relations among cooperative societies both within each country and with those of other countries has received considerable attention. The need of uniform statistics on cooperation in all countries has been repeatedly urged, and at the

¹ The information on which this article is based was obtained from reports of the proceedings of the Congresses of the International Cooperative Alliance, 1895-1913; from International Cooperative Bulletins for January, 1919, February-March, 1919, and June-July, 1919; and original material in the possession of the Bureau.

second congress the establishment of an international bureau of statistics was advocated.

At the outset profit sharing held a prominent place in the discussions and many delegates regarded its advancement as one of the chief aims, if not the chief aim, of the alliance. With each successive congress, however, interest in this phase of cooperation steadily declined and profit sharing was omitted from the list of objects of the alliance in the revised rules adopted at the Hamburg Congress in 1910.

The present aims and purposes of the International Cooperative Alliance are as follows:

- (a) The ascertaining and propaganda of cooperative principles and methods;
- (b) The promotion of cooperation in all countries;
- (c) The keeping up of friendly relations between the members of the alliance;
- (d) The collection and unification of cooperative statistics;
- (e) The provision of information and the encouragement of studies concerning cooperation;
- (f) The promotion of trading relations between the cooperative organizations of the various countries.¹

Cooperative Conferences at Paris.

Inter-Allied Cooperative Conference.

During 1918 repeated suggestions were received by the executive committee of the alliance that a meeting be convened at the earliest possible moment. After the signing of the armistice the question was again raised, and it was urged not only that an international meeting be called, but that the international body be represented at and make representations to the Peace Conference. The suggestion of the French Federation of Cooperative Societies that as an initial step a conference of representatives of the central cooperative organizations should be convened in Paris was therefore favorably received by the executive committee. The committee decided, however, that, while in view of the importance of the conference to the movement as a whole, it was essential that the alliance be represented, it should be simply in a consultative capacity.

The following were agreed to as subjects for discussion at the conference:

1. The economic relations between the nations and the attitude of the cooperative movement toward the Peace Congress.
2. The best means of unifying cooperative effort to assist in reestablishing cooperation in the countries devastated by the war (France, Belgium, Serbia, and to some extent, Roumania, and Italy).
3. The international commercial relations to be established between the central cooperative organizations of the alliance.

¹ Report of proceedings of Eighth Congress of the International Cooperative Alliance, held at Hamburg, 1910, p. 48.

The conference was held at Paris, February 7-10, 1919. The representatives of the various countries were as follows:

BELGIUM:

BERTRAND, Federation of Belgian Cooperative Societies.

VICTOR SERWY, Federation of Belgian Cooperative Societies.

CZECHO-SLOVAKIA:

J. HAVLASA, member, Commission to Negotiate Peace.

FERDINAND JIRASEK, president, Central Federation of Czecho-Slovak Cooperative Societies of Prague.

F. MODRACEK, member, National Assembly of Bohemia.

FRANCE:

CHAS. GIDE, president of Conference.

A. J. CLEUET.

A. DAUDÉ-BANCEL.

J. GARBADO, Cooperative Wholesale Society.

GASTON LÉVY.

ERNEST POISSON, general secretary, Federation of French Cooperative Societies.

P. RAMADIER.

HENRI SELLIER.

ALBERT THOMAS, former Minister of Munitions and War Industries.

P. WASEIGE.

GREECE:

ALEXANDRE C. MILONAS, general secretary, Special Mission of Greek Ministry of Agriculture.

ITALY:

CANEPA, Federation of Italian Cooperative Societies.

LITHUANIA:

WILLIMVITCO, Cooperative League of Lithuania.

RUSSIA:

NICHOLAS TCHAIKOWSKY, Foreign Minister of Archangel Government of the North.

UNITED KINGDOM:

F. HAYWARD, British Cooperative Union.

A. WHITEHEAD, British Cooperative Union.

A. W. GOLIGHTLY, English Cooperative Wholesale Society.

W. HEMINGWAY, English Cooperative Wholesale Society.

J. BARDNER, Scottish Cooperative Wholesale Society.

A. MACINTOSH, Scottish Cooperative Wholesale Society.

L. P. BYRNE, Irish Cooperative Wholesale Society.

A. M. SMITH, Irish Cooperative Wholesale Society.

G. BROWNBILL, English Cooperative Newspaper Society.

UNITED STATES:

H. BRUCE BROUGHAM, Cooperative League of America; American Cooperative Wholesale Society; special agent on cooperation, U. S. Bureau of Labor Statistics.

INTERNATIONAL COOPERATIVE ALLIANCE:

WILLIAM MAXWELL, president, International Cooperative Alliance.

H. J. MAY, general secretary, International Cooperative Alliance.

After the welcoming address by President Charles Gide, the conference took up the question of international cooperative trading and decided to submit to the Peace Conference a memorandum of which the following¹ is a part:

1. That the functions and powers of the Inter-Allied Committees of Food Control be maintained and extended for the equitable distribution of foodstuffs, according to the available resources among the nations in accordance with the needs of each.

2. The Inter-Allied control of transport of merchandise by water or by land; the fixing of a maximum price of freight and insurance; and the establishment of rates for these products when the Governments themselves will not undertake directly to take charge of these enterprises.

3. The collaboration of public powers with the cooperative organizations of each country in order to assure an equitable distribution, and at reasonable prices, of provisions imported in common equally with all other merchandise.

4. The creation of an International Office of Economics to collate statistics in the matter of food supplies, as a means of coordinating and directing the Inter-Allied Food Control Committees. This office will prepare, for use after the war—through intelligence of the needs, resources, and conditions of consumption and production of each country—the economic cooperation and division of work among the peoples.

5. The signing of a full commercial treaty—or of commercial agreements comprising a general system—between all the countries, capital and colonial, which will form part of the League of Nations, and which will have the effect of placing them on equal footing. In consequence, customs duties, for such time as they exist, should only be of a fiscal character and nonprohibitive; and if bounties for export are given, they should be exceptional or provisional.

6. The multiplication of facilities of exchange; the exchange of the products of capital and of labor, and, particularly, the unification of social laws, of weights, measures, and money; and facilities for travel and stay in the different countries.

7. The adoption of an international financial system for the liquidation of war debts in order to avoid the disastrous reaction on the cost of living and the unregulated increase of prices.

8. Consideration in common by the nations of great economic projects for the development of civilization, such as the Channel Tunnel, and so on; and for the progress of social hygiene by controlling products dangerous to the public health. The realization of these projects should be made outside private profit-making concerns and with the collaboration and the control of representatives of associated consumers.

9. The national cooperative organizations of the Allies believe that the international character of these measures is the economic sequence of the realization of the political League of Nations. They do not exclude measures of economic defense against the States not joining the League of Nations, and they take it for granted that, preparatory to the realization of these measures, material restoration will have been made for the invaded regions and the victims of the war.

The Inter-Allied cooperative organizations do not forget that the causes of war are not always political. International private trading has never given peace to the world. It has caused thousands of conflicts, because it is a form of struggle—the struggle for profit. That is why cooperation in the world has been, is, and will be, a means of strengthening the definite organization of peace, by the cooperation of consumers, and by the economic association of the peoples.

¹ Taken from typewritten report in possession of the Bureau.

A further resolution¹ was interpreted as the first step toward the formation of an International Cooperative Wholesale Society:

The Inter-Allied Conference, confirming the resolution adopted in 1916, decides that an international bureau of statistics and commercial information will be constituted. The organization of this bureau, as well as the establishment of commercial relations between the different countries, are left to the Inter-Allied Cooperative Office for practical realization.

Meeting of International Committee on Relief of Devastated Areas.—In accordance with instructions by the conference an international committee was formed to deal with the proposed relief of societies in the countries devastated by the war. This committee met in London, on March 4, 1919, and made the following report¹:

Before the war direct commercial relations existed between several of the wholesale societies, notably those in Manchester, Antwerp, Paris, and Basel.

The Inter-Allied Cooperative Conference asks that these relations be organized on a systematic basis, and that the exchange of goods of the wholesale societies, especially their own productions, be centralized.

With this end in view, it is necessary to form a committee together with a secretariat, the organization of which would be based on that of the export department of the Cooperative Wholesale Society at Manchester. The secretariat would issue periodically a price list of goods, together with terms of export of each of the wholesale societies, copies of which would be addressed regularly to each of the wholesale societies in membership.

Business would be transacted between the wholesale societies direct, but duplicates of orders and invoices sent to the secretariat.

Amongst the duties of the secretariat would be the collection and transmission of information bearing on the source of production and the state of the market. It would also organize, in connection with national and international congresses, exhibits of cooperative productions of the wholesale societies.

Finally, the committee would concern itself immediately with the best means for assisting cooperative societies in the devastated areas, both in regard to supply of foodstuffs and financial aid. In this respect the secretariat would help in the execution of measures adopted by the committee.

The secretary would be nominated by the English Cooperative Wholesale Society; his nomination to be ratified by the committee.

The committee will be constituted in accordance with the resolution of the Inter-Allied Cooperative Conference adopted in Paris. It will elect a chairman, who in conjunction with the secretary for export and the secretary for the organization of meetings, the drafting of minutes, and so on, will constitute the executive committee.

In the opinion of the subcommittee, the secretary of the International Cooperative Alliance should fill the latter office.

The committee of the bureau will meet regularly every two months in a town in one of the Allied countries.

In order to meet the financial requirements of the new organization, an initial contribution of £—— will be demanded of each wholesale society for sales to the amount of £1,000,000, or of Fr. —— for sales to the amount of Fr. 1,000,000.

¹ Taken from typewritten report in possession of the Bureau.

Inter-Allied and Neutral Cooperative Conference.¹

A second international conference was held in Paris June 26-28, 1919. Neutral as well as Allied countries had been invited to send cooperative representatives, and delegates were present from America, Armenia, Belgium, Bohemia, Finland, France, Georgian Republic, Great Britain, Greece, Holland, Lithuania, Roumania, Russia, Sweden, Switzerland, and Ukrania.

The program was practically identical with that of the Inter-Allied Conference. No complete report of this second conference is as yet available, but the resolutions fairly summarize the work and results. These resolutions are, in part, as follows:

I.—International Trading Relations.

The Inter-Allied and Neutral Conference held on June 26, 27, and 28, 1919, in Paris, convened to consider the question of the trade relations between wholesale societies, declares that there is a necessity to organize, as soon as possible, international cooperative trade relations for the purpose of establishing an International Cooperative Trading Organization.

It recalls that a resolution in the same sense was accepted by the Congress of the International Cooperative Alliance at Cremona, 1907, and confirmed by the congress at Hamburg, 1910, and Glasgow, 1913.

It thinks it superfluous to demonstrate that the events of the last years have more than ever shown the irresistible necessity to establish these relations as a certain means to fight against trusts, holding up of goods, and chaotic capitalistic production.

To realize this object it declares it necessary to nominate a committee composed of a delegate of each wholesale society affiliated to the International Alliance and of those wholesale societies not at present members of the International Cooperative Alliance, but who signify their intention of affiliating.

For the first meeting of this commission, the executive committee of the International Cooperative Alliance should invite all the existing wholesale societies without requiring their previous affiliation.

II.—Constitution of the Committee to Assist Cooperation in the Devastated Areas.

The Inter-Allied and Neutral Conference held in Paris on June 26, 27, and 28, called to solve the question of the help which has to be brought to the cooperators of the devastated areas and for the supplying of goods to the newly formed countries, is of opinion that it is necessary to constitute a special committee to consider the needs of the nations who have suffered by devastation, or by the war in general, as well as the needs of the newly formed countries; to satisfy them by sending goods, by opening of credits, by loans, and by all other means, supported in this work by the existing wholesale societies.

The committee will be composed of a delegate from each National Cooperative Union, and of a delegate from each wholesale society which is serving on the International Trading Relationships Committee.

¹ Data from International Cooperative Bulletin, June-July, 1919, pp. 102-106.

III.—*The Next Meeting of the Central Committee.*

(a) The Inter-Allied and Neutral Conference asks the executive of the I. C. A. to convene a meeting at the office of the alliance, on August 19 next, for the purpose of considering the question, date, place, and agenda of the next meeting of the central committee of the alliance.

(b) The Inter-Allied and Neutral Conference expresses the desire that the meeting of the central committee should be held at the end of the present year, and if possible, at Geneva.

The program of business should include:

1. The reintegration of the International Cooperative Alliance.
2. The question of summoning the next International Cooperative Congress.
3. The consideration of the decisions of the Inter-Allied and Neutral Conference.

IV.—*The Representation of the Newly Constituted Nations in the International Cooperative Alliance.*

The central organizations of the newly constituted nations are invited to join, as early as possible, the International Cooperative Alliance and to conform to its rules.

Cooperative Movement in the United Kingdom.¹

THE cooperative movement is of British origin. The beginning of the nineteenth century saw the inception of the cooperative idea as part of the measures of social reform advocated by Robert Owen, and in the period 1828 to 1834 numerous cooperative stores were started. But the real cooperative movement came only with the establishment in 1844 of the Rochdale Society of Equitable Pioneers. This society was the result of the endeavor of 28 weavers of Rochdale to find relief from the poverty, unemployment, adulterated food, extortionate prices, and other evils from which they were suffering.

In England, as in all other countries in which the cooperative idea has taken hold, the original "Rochdale principles" form the basis of the present-day cooperative societies. To become a member a £1 (\$4.87) share must be purchased, but may usually be paid for in installments of 3d. (6.1 cents). The maximum value of shares that can be held by one member is fixed by law at £200 (\$973.30). Each paid-up share bears interest, limited generally to 5 per cent, and its value never rises above par. In the general meetings of the society, each member has one vote, irrespective of sex or of number of shares held, and is eligible to a seat on the board of management or to any other representative office.

¹ The information on which this article is based was secured from the Labor Gazette (London) for August, 1918; a typewritten article by Mr. H. J. May, secretary of the parliamentary committee of the British Cooperative Congress; the Cooperative Wholesale Societies (Ltd.) Annual for 1918; the People's Yearbook for 1919; the International Cooperative bulletin for April, 1919; and original material in the possession of the Bureau.

Goods are sold, for cash, at current prices, but at the end of each quarter or half year the "profits" (that is, the surplus over cost price plus expenses of management, etc.) are divided among the purchasers in proportion to the amount of purchases made. Non-members usually receive half the rate of dividend paid to members.

The cooperative ideal is to eliminate the present industrial competitive system by means of mutual association and to substitute mutual service for the common good, and thus by the principle of service for service make the instinct of self-interest promote the common good. Cooperation in its narrow sense is the combination of producers for the purpose of selling their product to the best advantage or of consumers to reduce prices. The cooperative movement, however, considers not only the purity of the goods bought but the conditions under which they were produced, the wages paid workers in their production, and the hours worked; in short, it endeavors to raise the standards all along the line from production to consumption. One writer states that "there is a large and rapidly increasing number of cooperators who, like the early pioneers, regard storekeeping and cooperative workshops and factories as the beginning of a new social life, out of which in due time will come the real cooperative commonwealth."¹

Work of Production and Distribution.

The history of the cooperative movement as a whole has been one of steady growth, and the work done by the cooperative societies has reached enormous proportions. The Labor Gazette for August, 1918,² contains the following account showing the extent of the operations of the cooperative societies of the United Kingdom during the year 1916, the latest year for which complete figures are available:

At the end of 1916 there were at work in the United Kingdom 1,488 industrial cooperative distributive and productive societies with an aggregate membership of 3,563,769, a total share, loan, and reserve capital of £77,937,736 [\$379,283,992]; a total trade (distributive and productive) of £237,525,135 [\$1,155,916,069],³ and a total profit—before deduction of interest on share capital—of £18,958,388 [\$92,260,995].

Excepting for a decrease of 10 in the number of societies—due mainly to amalgamations—these figures show a remarkable growth as compared with 1915, there being an increase in membership of 257,450, or 7.8 per cent; in capital of £7,611,259 [\$37,040,192], or 10.8 per cent; in trade of £39,290,948 [\$191,209,398], or 19.8 per cent; and in profit of £1,990,439 [\$9,686,471], or 11.7 per cent.

The total number of persons directly employed by the societies was 154,622,³ and the total wages paid during the year amounted to £10,391,245 [\$50,568,993],³ compared with 149,852 employees and £9,607,434 [\$46,754,578] in wages in 1915.

¹ Webb, Catherine: *Industrial cooperation*, p. 2.

² *Labour Gazette*, London, August, 1918, pp. 304, 305.

³ These figures are exclusive of the number and wages of persons employed in agriculture by industrial distributive societies, and of the sales and transfers of agricultural produce by these societies.

While some of the societies are engaged only in distribution and some only in production, others are engaged in both distributive and productive operations. In the following statistics, however, distribution and production are dealt with separately.

Distribution.

At the end of 1916, 1,364 retail and two wholesale industrial societies were engaged in distribution. These societies had an aggregate membership of 3,524,247, a total share, loan, and reserve capital of £69,936,787 [\$340,347,374]¹; sales amounting to £188,583,043 [\$917,739,379], and a profit on distribution—before deducting interest on share capital—of £18,143,695 [\$88,296,292], while the total number of persons employed in distribution by the societies was 96,466, and the total wages paid £6,099,729 [\$29,684,331].

Of the total profit of £18,143,695 [\$88,296,292], a sum of £16,442,913 [\$80,019,436] was made by the retail societies, and £1,700,782 [\$8,276,856] by the two wholesale societies. In the case of the retail societies the greater part of the profit was distributed to the members as a dividend on purchases, at an average rate of 2s. 2d. [52.7 cents] in the £1 [\$4.87] in England and Wales, 2s. 10d. [69 cents] in Scotland, and 1s. 3½d. [30.9 cents] in Ireland, the average for the United Kingdom being 2s. 3d. [54.8 cents]. Compared with 1915 these rates of dividend show a decrease of 1½d. [2.5 cents] in England and Wales, and 2d. [4.1 cents] in Scotland, an increase of ½d. [1.5 cents] in Ireland, and a decrease of 1½d. [3 cents] for the United Kingdom. Non-members usually receive dividends at one-half these rates.

The English and Scottish wholesale societies paid to members a dividend on purchases of 5d. and 8d. [10.1 and 16.2 cents] in the £1, respectively. This was a decrease on 1915 of 1d. [2 cents] in the case of each society.

Profit sharing with employees.—Of the total 1,364 retail societies, 135, employing 14,629 persons and paying wages amounting to £919,560 [\$4,475,039] in their distributive departments, allotted out of the profits a total of £42,542 [\$207,031] to their employees as a bonus on wages, this being equal to 4.6 per cent on wages.

Production.

In 1916 there were 1,118 industrial cooperative societies of various types engaged in production, consisting of 996 retail and two wholesale distributive societies having productive departments, and of 120 associations for production only; these consisting of 2 corn-milling societies, 37 breadmaking and other consumers' societies, and 81 associations of workers.

The total number of persons employed by these societies was 58,123, the amount of wages paid during the year was £4,290,228 [\$20,878,395], and the value of productions £48,932,803 [\$238,131,481]. Of the 58,123 persons employed in production 46 per cent were men, 34.2 per cent women, and 19.8 per cent were young persons under 18 years of age.

The total value of productions has increased in 10 years by £32,582,953 [\$158,564,941], or 199.3 per cent, the greatest increase of 238.4 per cent being shown by the productive departments of the retail societies. The productive departments of the wholesale societies show an increase of 219.5 per cent, the baking and other consumers' societies an increase of 151.8 per cent, and the associations of workers 115.4 per cent. Corn-milling societies show a decrease of 74.9 per cent, this being due to the absorption of several of the mills by the English wholesale society.

¹ The figures include the capital used in the productive departments of retail societies, and the profit upon the productions of these societies, the amounts not being available separately. The capital used in the productive departments of the wholesale societies, £5,493,259 [\$26,732,945], and the profit £463,384 [\$2,255,058] are not included.

A total profit of £814,125 [\$3,961,939] was made upon industrial production by societies other than retail societies, the profits of the latter being merged in the general profit and therefore not separately ascertainable.

Of this total £463,384 [\$2,255,058] was made by the wholesale societies, £3,444 [\$16,760] by the corn-milling societies, £162,914 [\$792,821] by breadmaking and other consumers' societies, and £184,383 [\$897,300] by the associations of workers.

Profit sharing with employees.—Of the 1,118 societies engaged in industrial production, 132, employing 10,918 persons in production with wages amounting to £798,353 [\$3,885,185], allotted a sum of £52,345 [\$254,737] to these employees as a bonus on wages, this being equal to 6.6 per cent. Of the total amount, £11,253 [\$54,763] was allotted by 88 retail distributive societies, £8,752 [\$42,592] by 4 consumers' productive societies, and £32,340 [\$157,383] by 40 associations of workers.¹

Unfortunately, as has been said, complete figures are not available for any year later than 1916. The following summary figures show, for 1917, the work of the societies which form the membership of the English Cooperative Union:

OPERATIONS OF THE ENGLISH COOPERATIVE UNION, 1917.¹

Kind of society.	Number of societies.	Number of members.	Share and loan capital.	Sales.	Net surplus.	Number of employees.	Salaries and wages.
Distributive societies.....	1,358	3,788,490	\$271,290,308	\$691,060,578	\$77,458,090	118,716	\$41,198,149
Distributive federations...	5	60	142,462	628,411	42,008	26	10,614
Productive societies.....	97	36,358	8,783,809	25,045,243	1,750,675	10,038	3,731,856
Supply associations.....	3	8,282	2,133,415	8,334,942	285,187	1,816	799,055
Special societies.....	4	278	280,841	2,337,545	143,017	483	182,469
Wholesale societies.....	3	1,908	54,885,993	387,136,264	8,865,045	31,424	12,896,527
Total.....	1,478	3,835,376	337,516,828	1,094,542,983	88,544,021	162,503	58,820,679

¹ Cooperative Wholesale Society (Ltd.). The People's Yearbook, 1919, p. 53.

Work of Wholesale Societies.

The growth of the productive works is consequent on the growth of the cooperative wholesale societies. From the formation in March, 1864, of the first English cooperative wholesale society this growth has been steady, as is shown by the fact that their sales, which in 1865 amounted to £120,754 (\$587,649), increased to £1,964,829 (\$9,561,840) in 1875; in 1885 they amounted to £4,793,151 (\$23,325,869), in 1895 to £10,141,917 (\$49,355,639), in 1905 to £20,785,469 (\$101,152,485), in 1916 to £52,230,074 (\$254,177,655), in 1917 to £57,917,521 (\$281,855,616), and in 1918 to £65,167,960 (\$317,139,877). Following is a list of the productive factories of the cooperative wholesales, to which additions are being constantly made:

Flour mills.—At Manchester and Oldham, in Lancashire; Avonmouth, in Gloucester; Dunston, in Durham; Silvertown, in Essex; Halifax, Slaithwaite, and Sowerby Bridge, and Hull in Yorkshire.

¹ 25 of these societies and 4 additional societies (3 in England and 1 in Scotland) allotted in addition £5,649 [\$27,401] to provident funds for the benefit of their employees.

Soap works.—At Dunston, in Durham; Irlam, in Lancashire; Silvertown, in Essex.

Textile and clothing mills.—At Batley, Delph, and Diggle (woolen), Leeds, Pelaw, London, and Cardiff (ready-mades), Littleborough (flannel), Sheffield and Cardiff (overalls); Broughton and Crewe (mantle, shirt, tailoring, and underclothing), Bury, Radcliffe, and Chorley (cotton weaving), Desboro' and Kettering (corsets and blouses); Huthwaite (hosiery); Birmingham (pinnafores); Hebden Bridge (fustians).

Metal industries.—At Birtley (tinplate), in Durham; Dudley (buckets, fenders, etc.), in Worcestershire; Keighley (all sorts of ironware), Sheffield (cutlery), in Yorkshire.

Printing, bookbinding, etc.—At Longsight and Warrington, in Lancashire; Leicester, in Leicestershire; Pelaw, Newcastle-on-Tyne.

Boots and shoes, etc.—At Leicester (two works) and Enderby, in Leicestershire; Leeds, Heckmondwike, and Pontefract (fellmongering), in Yorkshire; Rushden and Wellingborough, in Northamptonshire.

Other factories.—At Broughton and Pelaw (cabinet), Crumpsall (biscuits), Manchester (tobacco), Middleton, Silvertown, Clayton, and Hull (jams, pickles, vinegar, etc.), Rochdale (paints), in Lancashire; Leeds (brushes), in Yorkshire; West Hartlepool (lard), in Durham. New jam factory at Acton, Middlesex; and sawmills at Wymondham, in Norfolk. Oil mills, Liverpool. Drugs and drysalteries at Pelaw.

The wholesale society maintains butter and egg depots at Armagh, Cork, Limerick, and Tralee, in Ireland. There is also a bacon factory at Tralee and a butter factory at Birslington, near Bristol. In addition, a cocoa factory at Luton employs 249 persons, and there are extensive tea estates in India and Ceylon, on which 2,642 persons are employed. In connection with the overseas enterprises, wharfage accommodations and warehouses have been acquired at Wapping (London) having a storage capacity of about 15,000 tons. The English Cooperative Wholesale Society owns and controls 30,000 acres of land in England, and its policy is said to be to buy up every acre of tillable land that is offered for sale in Great Britain. It has purchased a coal mine in Northumberland, and other mines have been purchased and sunk.

Difficulty of Securing Supplies.

Nevertheless, in spite of the magnitude of its productive enterprises, the cooperative movement has found itself at a disadvantage. It is obvious that the effectiveness of the cooperative wholesales depends on their ability to secure supplies, and in view of this fact the following statement, which appeared in the Second Report of the

Committee of the Fabian Research Department on "The control of industry," published May 30, 1914, is interesting:

Making various necessary allowances, it is estimated that the two wholesales supply the stores with about five-eighths of all the goods that these distribute, leaving about three-eighths as their purchases from capitalist traders. But less than 25 per cent of the goods sold by the English society to its membership of nearly 1,200 societies consisted of products of its own manufacturing departments.

The retail cooperative stores of Great Britain, therefore, buy three-eighths of the goods they dispense to their members directly from profit-making middlemen, and of the five-eighths which they get from their wholesale societies about 75 per cent is obtained from capitalist manufacturers.

During the war the apportionment of supplies was largely under Government control. Since the war, however, these cooperative societies have experienced increasing difficulty in obtaining supplies, and the leaders of the cooperative movement have repeatedly expressed their conviction that private interests have made wholesale inroads into the system of governmental control; and that they have strengthened their financial resources by combination of interests and control of the legislation and machinery of the State.

Memorandum to the Peace Conference.

So greatly have the British cooperators been impressed with the seriousness of the situation that a memorandum was prepared and submitted by them to the Peace Conference. After dwelling upon the disadvantages under which the movement is laboring the memorandum declares that development along two lines is necessary to the existence of the cooperative movement: (a) The establishment of direct cooperative international trade, and (b) the securing of such control over raw materials as will enable the cooperative movement to dictate the terms of its supply to manufacturers. With regard to these points the memorandum states:

In so far as direct trade between the cooperative movement of different nations has taken place, it has hitherto been largely confined to the disposal of surplus stocks not required for home consumption. There has been little or no attempt to estimate and supply the needs of the movement in other countries and to produce in turn the goods of which those countries are in need. Thus the manufacturing countries might draw supplies of metal from Russia (the only country whose metal resources have not been largely exploited by capitalists) and produce the machinery, fittings, agricultural implements, etc., of which Russia stands so much in need.

A beginning of this expansion of cooperative trading has already been made, e. g., the proposal of Belgian cooperators to place orders in Great Britain and the plans for a direct interchange of certain goods between the movements of this country and Russia. The time is ripe, however, for the working out by cooperators of all nations in common of a great international scheme which shall have regard not only to the requirements of the moment, but to the developments of the future, with a view to making the world

cooperative movement self-supporting and independent of capitalist sources for its supplies of raw materials. The fact that the trade of Russia, a country of vast undeveloped natural resources, is now largely conducted through the medium of the cooperative movement offers an unprecedented opportunity for a great beginning to this new enterprise, though the operations of such companies as the Irtysh Corporation show that if the resources of Russia are to be secured for cooperation and not for capitalism there is no time to be lost. * * *

[As to control of raw material] the aim of the movement must be not merely to secure those materials which it needs for its own production, but to control supplies of raw materials for all industry, in fact, to obtain a monopoly of raw materials. The most effectual method of securing this control would be for the cooperative movement to act internationally, and come into the market as a single buyer, as the Allied Governments have done in the case of wheat, meat, etc., afterwards dividing the purchase according to national needs. By this means, with the whole resources of the cooperative movement of the world behind it, cooperation could capture one raw material after another, and the wholesale in each country would become the controlling agency in the supplies for this country. The immediate steps needed would be the formation of an international cooperative buying organization, which might be effected by an expansion of the operations and membership of the International Wholesale lately formed between Norway, Sweden, Denmark, and Finland.

It is probable, however, that the Peace Conference may decide to maintain some system of rationing raw materials, of which there is a scarcity, for a certain period after peace is signed, and that the League of Nations may set up some machinery for this purpose. In such an event the cooperative movement would not be able to enter the market as a buyer on its own account, but it might well claim, as being an international organization of a nonprofit-making character, to act as agent of the League of Nations for this purpose, just as private traders have acted as agents for the Allied Governments in their wheat and meat purchases. The various wholesales would then become the distributing machinery of the League of Nations, and when the rationing period ended the movement would have the knowledge and experience necessary to act successfully on its own account. * * *

The development of international cooperative trade on a large scale would necessitate a great and very rapid increase of cooperative production, and for this the control of raw materials would be the means. But, as in the international policy of the movement, so, too, in its internal policy, a wholly new and far wider conception of the functions and scope of cooperation will be needed if the cooperative movement is to overcome the forces of capitalism and fulfill its purpose as the industrial system of the future. The control of raw materials by the movement would compel the wholesales of each country to abandon the policy of confining their markets as far as possible to cooperative societies. They would have to be prepared to supply all manufacturers with raw materials on a nonprofit-making basis. Their control would enable them to contract for the whole or part of the output on such terms as would have the effect of transforming private businesses into agents for the Cooperative Wholesale Society working at a fixed rate for services rendered, and would thus eliminate profit making.

There are many problems connected with such a policy which are outside the scope of this memorandum. But, in face of the capitalist menace, it will be seen that a policy on the above lines is essential if cooperation is not to be strangled by capitalist combines and if a cooperative system of industry is ultimately to replace a capitalist system.

The Cooperative Movement in France.

ACCORDING to a writer in *L'Economiste Francais* (Paris, June 21, 1919), there were 1,500,000 cooperators in France in August, 1918, and their yearly accounts amounted to about 600,000,000 francs (\$115,800,000).

In 1916 the Cooperative Union was formed by amalgamating the principal Paris societies with a monthly turnover of over 2,000,000 francs (\$386,000), and a membership of 14,000. The union has been very active in popularizing the consumption of frozen meat, and has organized its sale in a number of stores in collaboration with the public authorities. During the winter of 1917-18, it made a daily distribution of potatoes and dried vegetables at the request of the city authorities, and also distributed the municipal coal reserves to the population. Communal restaurants have also been opened by the union.

The author states that this development, useful as it may have been in time of war, has met with considerable opposition from private business since the proposal has been made to continue the policy of collaboration in peace time, the argument being that the cooperative societies are placed in a privileged position. The question has been discussed in Parliament during debates on the high cost of living.

The writer disputes the contention that a continuance of subsidies to cooperative societies is desirable in the interests of the consumer, and claims that retail prices in cooperative stores have been largely affected by the general food shortage.

The high cost of living has assisted the growth of the cooperative movement. This growth is in a manner artificial, because the societies have become the assistants of the State or of municipalities, and have for this reason been favored by the authorities. It is to be regretted, even for the future of this method of production and sale, that certain of its advocates should represent it as being one of the instruments for the transformation of society. It is in the interest of cooperators themselves and their cause that they should confine their activities strictly to the cooperative field of work.

It is interesting to note that the cooperative movement in France, in spite of its growth during the war, is still far behind the development shown in England, where the writer states that the number of members has risen to 4,000,000, the capital invested to £50,000,000 (\$243,325,000), and the total turnover to £80,000,000 (\$389,320,000).

VOCATIONAL EDUCATION.

Training for Shift Bosses in a Copper Mine.¹

THE course of training for shift bosses given at the Copper Queen mine, Bisbee, Ariz., is of interest not only from the standpoint of the greater safety insured thereby, but also from the fact that such a course will add greatly to the number of trained men available for these positions when capable men are few. Recognition of the increasing scarcity of men who combine with an intimate knowledge of mining the ability to handle men and to interpret correctly the company policies has led to the establishment of what is known as the Warren District Practical Mining Course, which is designed for the education of miners to enable them to qualify for positions as shift boss.

The plan provides for one lecture a week, 43 lectures covering a period of 10 months; these lectures are given in both the afternoon and the evening to accommodate both shifts. The subjects are so arranged that men may start at any time during the 10 months. The lectures are printed and distributed among those taking the work previous to being delivered. They are perforated and contain a bibliography of the subject and possible examination questions, thus permitting a preliminary study of the subject and allowing the lecture period to be largely discussion and amplification.

For the purpose of examining and rating applicants for shift-boss positions an examining board, consisting of the superintendent of the mining department, two underground superintendents, and two miners selected from the men who have completed the course meet and rate applicants upon the following scale:

Experience, 20 points; attendance, 10 points; habits, personality, and ability to handle men, 20 points; examination, 50 points; passing grade, 80 per cent.

It is not necessary that applicants take the course to be put on the eligible list for shift-boss positions; they may merely take the examination and be rated. Men passing the examination will be given a certificate signed by the examining board, which is of value in any mining community, as the high standards of the Copper Queen are well known.

The present corps of foremen and executives of the Copper Queen acts as a board of advisers for the course, adding their knowledge of Copper Queen methods and policies to the knowledge of the lectures. With one exception, the latter have been taken from the men within the organization who have specialized in the study of the various subjects. S. C. Dickenson, formerly in charge of the department of safety and welfare of the Arizona State Bureau of Mines, is director of the course, and is giving his full time to the plans for the development of efficient and sympathetic shift bosses.

¹ Summarized from Educational Methods at the Copper Queen, by Charles F. Willis, published in Bulletin 151, July, 1919, of American Institute of Mining and Metallurgical Engineers.

Lectures.

During the spring of 1918, a number of miscellaneous lectures were given in mining subjects, in which such interest and enthusiasm were shown that the company was encouraged to go into the work on a larger scale, with a definite purpose in view, and the course as outlined below is the result of that work.

1. Mine tools—pick, shovel, gad, hammer, etc., their use, design, and analysis. Mucking.

2. Breaking ground, general.

3. Drifting—breaking, drift rounds, etc.

4. Drifting—drift timbering, ordinary and heavy timbering, drift repairs, etc.

5. Drifting—track, track maintenance, road maintenance, switches.

6. Shaft sinking, including type rounds, timbering, etc.

7. Raises—type rounds and methods.

8. Raises—timbering, six-post and crib raises.

9. Selection of mining method—various factors governing the same, method and analysis of these factors.

10. Stopes—square-set mining.

11. Stopes—horizontal and inclined top slice.

12. Cut and fill—horizontal and incline.

13. Stopes—caving methods, Inspiration, Ray, Morenci, etc.

Miscellaneous Individual Subjects.

14. Sampling—various methods used, elements of inaccuracy, limits of precision necessary, etc.

15. Explosives—manufacture and use of explosives and necessary accessories—loading, firing, tamping, etc.

16. Metallurgical considerations in mining—relation between smelter and mine.

17. Fire-prevention and fire-fighting methods—methods of preventing fires, causes of fires, fighting fire risks.

18. Mine ventilation—study of needs and methods of adequate ventilation giving both mechanical and natural devices.

19. Safety work and accident prevention—place of shift boss in accident prevention.

Mechanical.

20. Applied mathematics—necessary mathematics to understand mechanical problems.

21. Principles of mechanics—mechanical types, etc.

22. Machinery—description, use, and care of water drifters.

23. Machinery—description, care, and use of stopers and pluggers.

24. Standard machine set-ups.

25. Electrical machinery—general description of electrical machinery and electrical devices in use around mines, motors, transmission methods, etc.

26. Hoisting and haulage—general description of hoisting methods and devices, underground haulage, relative to costs, efficiency, etc.

27. Air compression and transmission—general survey of methods and efficiency of air compression and transmission. Leaks—their importance, methods of determining, and their correction.

28. Pipes and pipe fittings, hoses, etc.—general survey of various types of pipe fittings, methods of using, their relative importance, necessity of care in selection, etc.

29. Drainage.

Geology.

30. General geology.
31. Geology of Warren district.
32. Elementary chemistry as applied to ores.
33. Ores of copper.
34. Map reading, map making, and interpretation.

Economics.

35. Elementary economics—brief survey of theory of economics of labor and capital, and industries in general, labor unions, labor policies, etc.
36. Efficiency engineering—history and importance of efficiency work, what it means, how it is applied, its particular problems, etc.
37. Psychology of handling men.
38. Division of labor.
39. Wages, bonuses, and other methods of compensation.
40. Accounting and timekeeping.
41. The cost sheet.
42. Communities of the shift boss.
43. Company policies.

It is stated that these lectures, though little advertised and still uncompleted, have been very successful from the standpoint of attendance, the average being about 200 men. While the success of this course can not as yet be estimated in the number of thoroughly efficient men turned out, it is believed that it will materially increase the number of men who have a better understanding of the mining industry and a broader comprehension of the relation between the miners and the company.

Technical Education Act of Canada.

THE bill for the promotion of technical education in Canada was signed by the Governor General on July 7, 1919. Although patterned after the United States Vocational Education Act it is materially different in one respect, in that it is strictly limited to the development of technical education as applied to industry and mechanical trades. The Minister of Labor is named as executive administrator and certain restrictions are placed upon the use of the money by the Provinces. The distribution of the appropriation of \$10,000,000 is not provided for, the salaries and the amount of money to be applied to each type of technical education being left entirely to the judgment of the administrator. The following is a summary of the more important provisions of the act:

The Technical Education Act provides for an appropriation of \$10,000,000 for the promotion of technical education in Canada.

By the term "technical education" is meant any form of vocational, technical, or industrial education or instruction approved by agreement between the Minister of Labor and the government of any Province as being necessary or desirable to aid in promoting industry and the mechanical trades, and to increase the earning capacity, efficiency, and productive power of those employed in them.

The Minister of Labor is vested with sole authority to judge of all questions arising out of the act and must submit an annual report to Parliament containing information as to the work done. Officers and employees may be appointed under the civil service, but no organization is outlined in the act.

The \$10,000,000 is to be expended in graduating amounts, beginning with an annual sum of \$700,000 in 1920 and increasing \$100,000 each year until 1924, from which time to the end of the fiscal year 1929 the sum will be \$1,100,000. The allotments are to be paid quarterly and can not exceed the amount spent on technical education by the Province within that year. Unexpended balances may be carried forward, provided that the balance does not exceed 25 per cent of the annual appropriation. In case it does, the approval of the Minister must be obtained. The sum of \$10,000 will be paid to the government of each Province every year, and the remainder of the appropriation for the year will be allotted and paid to the government of the Province in proportion to the population of each Province, respectively, as determined by the last Federal census.

The terms to which the Provinces must agree in order to receive the grant are:

1. All grants must be used for technical education in the manner agreed upon by the Minister of Labor and the government of each Province and approved by the Governor in council.

2. No part of the grant can be used to meet liabilities incurred prior to July 1, 1919, for lands, buildings, furnishings, or equipment secured for technical educational purposes.

3. Only 25 per cent of the annual grant can be used to secure land, or to erect, extend, or improve buildings, or supply furnishings and equipment.

4. Each Province shall make an annual report to the Minister.

5. The Minister shall be the sole judge of questions arising out of the act.

6. Every Province receiving a grant shall furnish evidence required by the Minister of Labor to show that the grants made are expended for technical education as provided in the act.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in August, 1919.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in August, 1919, from representative establishments in 13 manufacturing industries.

Comparing the figures of August, 1919, with those of identical establishments for August, 1918, it appears that in 6 industries there was an increase in the number of persons employed, while in 7 there was a decrease. The largest increase, 18.1 per cent, is shown in automobile manufacturing, and the greatest decreases—33.2 and 25.2 per cent—appear in cigar manufacturing and car building and repairing, respectively.

Ten of the 13 industries show an increase in the total amount of the pay roll for August, 1919, as compared with August, 1918, and 3 show a decrease. The most important percentage increases—31.9, 28.6, and 25.3—appear in silk, boots and shoes, and men's ready-made clothing, respectively. A decrease of 39.4 per cent is found in car building and repairing, while cigar manufacturing and iron and steel show respective decreases of 9.7 and 9.6 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN AUGUST, 1918, AND AUGUST, 1919.

Industry.	Establishments reporting for August both years.	Period of pay roll.	Number on pay roll in August—		Per cent of increase (+) or decrease (-).	Amount of pay roll in August—		Per cent of increase (+) or decrease (-).
			1918	1919		1918	1919	
Automobile manufacturing.	47	1 week..	108,058	127,664	+18.1	\$2,916,503	\$3,558,978	+22.0
Boots and shoes.	65	do.....	56,365	58,251	+3.3	982,968	1,264,073	+28.6
Car building and repairing..	46	1 month.	59,577	44,551	-25.2	3,691,716	2,237,645	-39.4
Cigar manufacturing.	46	1 week..	16,363	10,927	-33.2	213,516	192,729	-9.7
Men's ready-made clothing.	35	do.....	20,476	17,025	-16.9	340,424	426,502	+25.3
Cotton finishing.	17	do.....	14,102	14,380	+2.0	275,226	324,109	+17.8
Cotton manufacturing.	61	do.....	56,376	59,177	+5.0	904,570	1,054,616	+16.6
Hosiery and underwear.	60	do.....	30,221	28,667	-5.1	434,391	479,376	+10.4
Iron and steel.	102	1 month.	181,126	155,406	-14.2	11,302,328	10,222,074	-9.6
Leather manufacturing.	34	1 week..	17,360	17,336	-.1	367,308	430,922	+17.3
Paper making.	51	do.....	27,494	26,373	-4.1	598,907	622,119	+3.9
Silk.	37	2 weeks.	11,816	12,687	+7.4	346,096	456,656	+31.9
Woolen.	48	1 week..	46,456	46,680	+.5	940,509	1,009,675	+7.4

The following table shows the number of persons actually working on the last full day of the reported pay period in August, 1918, and August, 1919. The number of establishments reporting on this question is small, and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN AUGUST, 1918, AND AUGUST, 1919.

Industry.	Establishments reporting for August both years.	Period of pay roll.	Number actually working on last full day of reported pay period in August—		Per cent of increase (+) or decrease (-).
			1918	1919	
Automobile manufacturing.....	29	1 week....	61,359	85,970	+40.1
Boots and shoes.....	22	do.....	12,268	12,677	+ 3.3
Car building and repairing.....	45	1 month....	51,915	37,057	-28.6
Cigar manufacturing.....	14	1 week....	2,867	1,745	-39.1
Men's ready-made clothing.....	6	do.....	4,403	4,025	- 8.6
Cotton finishing.....	13	do.....	9,406	9,579	+ 1.8
Cotton manufacturing.....	38	do.....	27,216	28,764	+ 5.7
Hosiery and underwear.....	22	do.....	11,882	11,517	- 3.1
Iron and steel.....	89	1 month....	139,208	122,555	-12.0
Leather manufacturing.....	20	1 week....	13,575	13,079	- 3.7
Paper making.....	19	do.....	11,334	10,490	- 7.4
Silk.....	24	2 weeks....	8,141	8,953	+10.0
Woolen.....	40	1 week....	35,592	36,292	+ 2.0

Comparative data for August, 1919, and July, 1919, appear in the following table. The figures show that in 7 industries there was an increase in the number of persons on the pay roll in August as compared with July and in 6 industries a decrease. The figures for August are more or less affected by labor troubles in several of the industries.

The largest increases in the number of persons employed appear in iron and steel, 3.8 per cent; boots and shoes, 3 per cent; and automobile manufacturing, 2.9 per cent. The greatest decreases—16.4 and 8.2 per cent—are shown in cigar manufacturing and in car building and repairing.

In comparing August, 1919, with July of this year, 9 industries show an increase in the amount of money paid to employees and 4 show a decrease. The most important increase is one of 17.9 per cent in iron and steel, while the largest decreases—12.5 and 12.3 per cent—are shown in cigar manufacturing and in car building and repairing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JULY AND AUGUST, 1919.

Industry.	Establishments reporting for July and August.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (-).	Amount of pay roll in—		Per cent of increase (+) or decrease (-).
			July, 1919.	August, 1919.		July, 1919.	August, 1919.	
Automobile manufacturing	41	1 week..	107,525	110,686	+ 2.9	\$3,002,952	\$3,073,382	+ 2.3
Boots and shoes.....	62	do....	50,706	52,210	+ 3.0	1,068,906	1,145,952	+ 7.2
Car building and repairing..	45	½ month	48,213	44,236	- 8.2	2,532,363	2,220,130	-12.3
Cigar manufacturing.....	44	1 week..	13,040	10,905	-16.4	219,203	191,852	-12.5
Men's ready-made clothing.	39	do....	10,515	10,323	- 1.8	245,318	256,481	+ 4.6
Cotton finishing.....	16	do....	14,522	14,156	- 2.5	323,916	319,143	- 1.5
Cotton manufacturing.....	58	do....	57,813	57,855	+ .1	1,041,755	1,035,154	- .6
Hosiery and underwear.....	55	do....	26,305	26,454	+ .6	427,828	446,079	+ 4.3
Iron and steel.....	96	½ month	154,025	159,945	+ 3.8	9,119,161	10,747,051	+17.9
Leather manufacturing.....	34	1 week..	17,153	17,336	+ 1.1	395,032	430,922	+ 9.1
Paper making.....	50	do....	24,991	25,455	+ 1.9	557,826	599,892	+ 7.5
Silk.....	36	2 weeks..	12,787	12,665	- 1.0	437,511	455,381	+ 4.1
Woolen.....	48	1 week..	47,128	46,680	- 1.0	987,006	1,009,675	+ 2.3

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for July and August, 1919:

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN JULY AND AUGUST, 1919.

Industry.	Establishments reporting for July and August.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (-).
			July, 1919.	August, 1919.	
Automobile manufacturing.....	26	1 week....	76,589	79,692	+ 4.1
Boots and shoes.....	28	do....	13,987	15,045	+ 7.6
Car building and repairing.....	43	½ month....	42,789	36,595	-14.5
Cigar manufacturing.....	15	1 week....	3,596	1,752	-51.3
Men's ready-made clothing.....	4	do....	438	419	- 4.3
Cotton finishing.....	13	do....	10,643	10,140	- 4.7
Cotton manufacturing.....	36	do....	28,480	28,045	- 1.5
Hosiery and underwear.....	18	do....	10,215	10,076	- 1.4
Iron and steel.....	83	½ month....	125,178	127,572	+ 1.9
Leather manufacturing.....	19	1 week....	12,824	12,954	+ 1.0
Paper making.....	20	do....	11,721	12,187	+ 4.0
Silk.....	25	2 weeks....	10,061	9,570	- 4.9
Woolen.....	45	1 week....	38,060	37,702	- .9

Changes in Wage Rates.

During the period July 15 to August 15, 1919, there were establishments in 12 of the 13 industries which reported increases in wage rates and in 2, decreases. Of the establishments reporting, many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

Automobile manufacturing: An increase of 15 per cent to approximately 75 per cent of the force was reported by one plant. About 10 per cent of the employees in one establishment received increases of 10 to 12 per cent, and approximately 75 per cent of the employees in another establishment were increased about 10 per cent. An average increase of 8 per cent was granted by one concern to approximately 30 per cent of the force, and an average increase of about 8 per cent per man per hour and affecting about 7 per cent of the employees was reported by another firm. One plant granted a 7 per cent increase and the pattern makers in another plant were increased approximately 5 per cent, but the proportion of the force affected was not given in either instance. About 7 per cent of the force in one establishment received an increase of $2\frac{1}{2}$ cents per hour; 10 per cent of the force, 5 cents per hour; approximately 2 per cent of the force, 10 cents per hour; and one person, \$5 per week.

The average hourly productive rate in one plant was reduced 0.0132 per cent.

Boots and shoes: An increase of $12\frac{1}{2}$ per cent, affecting 25 per cent of the employees, was given by one plant. One firm gave 25 per cent of the force a 12 per cent increase, and 3 per cent a 10 per cent increase. Two establishments reported an increase of 10 per cent, this affecting about one-half of the people in one plant, while the other plant failed to give the number affected.

Cigar manufacturing: An increase of 25 per cent was granted in the shipping department of one factory and affected about 18 per cent of the employees. The entire force in two establishments received an increase of 20 per cent. An average increase of approximately 13 per cent to about 65 per cent of the employees was reported by one concern, and all of the pieceworkers in another concern were increased approximately 11 per cent. One plant gave the employees a bonus and an increase in wages and another plant gave a bonus and a 10 per cent increase in wage rates, but no further information was given.

Men's ready-made clothing: Five establishments granted a 20 per cent increase, this affecting the entire force in one plant, all of the employees in another, and about 95 per cent of the force in the third plant—the increase in the second and third plants being retroactive to June 1, 1919—the men in the fourth plant, which also gave the girls a 10 per cent increase, while the fifth plant failed to state the number of persons affected. Eighty-five per cent of the people in one shop received an average increase of 15 per cent, and one concern reported a 15 per cent increase but failed to give the proportion of the force affected. All of the employees in one establishment and about 59 per cent in another establishment received a 10 per cent

increase. An increase of about $6\frac{1}{2}$ per cent to 25 per cent of the force was reported by one concern.

Cotton finishing: An increase of 5 per cent was reported by one plant, but no further data were given.

Cotton manufacturing: An increase of 10 per cent to all of the employees was granted by one plant. The entire force in two plants was increased 9 per cent, and approximately 90 per cent of the force in one mill received an increase of about $7\frac{1}{2}$ per cent.

Hosiery and underwear: An increase of 20 per cent to the entire force was given in one mill. Four establishments reported an increase of 10 per cent, affecting all of the employees in one plant, 80 per cent of the force in another, one-sixth of the employees in the third plant, and 7 per cent of the force in the fourth establishment. An increase of approximately 9 per cent was granted in one mill. Three plants reported increases of $5\frac{1}{2}$ per cent, 5 per cent, and 3 to 5 per cent, affecting the pieceworkers in the first and last establishments, while the second plant did not give any data as to the employees affected.

Iron and steel: A 10 per cent increase was reported by two plants, which affected about 53 per cent of the force in one plant, while the other establishment did not give the number of employees affected; and another plant gave all of the "turn men" an increase of approximately 10 per cent and all other employees 5 cents per hour. One-third of the force in one establishment received an increase of about 8 per cent. An increase of 3.85 per cent was given to 37, 40, 42, and 47 per cent of the employees in four plants, while four other plants reported an increase of 2.73 per cent affecting 47 per cent of the force in two plants, 55 per cent in the third, and 57 per cent in the fourth. The sheet mill tonnage men, or about 3 per cent of the employees, in one plant received a slight increase.

A decrease of 25 per cent in the puddling rates, affecting 80 per cent of the force, was reported by five plants. All of the employees in one factory were decreased 17 per cent, and 15 per cent of the employees in another factory were decreased 8 per cent.

Leather manufacturing: Two establishments reported a 10 per cent increase, affecting practically the whole force in one establishment, and about 5 per cent in the other. One-half of the employees in one plant were given an increase of about 7 per cent.

Paper making: One plant gave 20 per cent of the employees an increase of 15 per cent and 70 per cent an average increase of 10 per cent. An increase of about 11 per cent to $77\frac{1}{2}$ per cent of the force was granted by one establishment. One plant reported a 10 per cent increase, affecting the entire force, while another establishment granted an increase of approximately 10 per cent, but did not give the number of persons affected. The laborers in one mill were in-

creased 25 cents per day, and the men on tower work in another mill were advanced 25 cents per day, and the women and the men on day work, 15 cents per day. One plant reported a general wage increase of 2 cents per hour. Two-thirds of the force in one establishment received an increase, the per cent of which was not given.

Silk: An increase of about 20 per cent to 15 per cent of the force was given by one establishment. Two plants reported an increase of 12½ per cent, which affected the entire force in one mill and one-third of the employees in the other. About 90 per cent of the force in one mill received an increase of about 11 per cent, and 95 per cent of the employees in another mill were given a 10 per cent increase. Another plant granted a 10 per cent increase but did not give the proportion of the force affected. One establishment gave an 8 per cent increase to about 40 per cent of the employees. Thirty per cent of the force in one mill were given a 5 per cent increase. One firm granted a wage increase to 75 per cent of the employees, but no further data were given.

Woolen: In one mill, 95 per cent of the force was increased approximately 10 per cent. One establishment reported an increase of 8½ per cent to about 8 per cent of the employees.

Report of Employment Exchanges in the United Kingdom.

AS REPORTED by the British Labor Gazette for August, 1919, the total number of workpeople remaining on the registers of the 414 British employment offices on July 11, 1919, was 690,437, as compared with 841,540 on June 6, 1919. These figures include workers in professional, commercial, and clerical as well as industrial occupations, but exclude casual occupations.

The operations of the employment exchanges for the five weeks are summarized as follows:

OPERATIONS OF BRITISH EMPLOYMENT EXCHANGES DURING 5 WEEKS ENDING JULY 11, 1919.

Item.	Men.	Women.	Boys.	Girls.	Total.
On registers June 6, 1919.....	551,464	253,945	18,175	17,956	841,540
Number of individuals registered during period.....	285,297	112,059	23,672	22,022	443,050
Total.....	836,761	366,004	41,847	39,978	1,284,590
Reregistrations during period.....	6,957	6,454	798	608	14,817
On registers July 11, 1919.....	490,677	170,755	14,746	14,259	690,437
Vacancies notified during period.....	90,522	66,392	15,278	14,247	186,439
Vacancies filled during period.....	65,605	39,556	10,692	9,227	125,080
Applicants placed in other districts.....	7,513	4,531	1,264	1,325	14,633

The average daily number of registrations, of vacancies notified, and of vacancies filled during the five weeks was 16,352, 6,659, and 4,467, respectively.

AVERAGE DAILY REGISTRATIONS AND VACANCIES NOTIFIED AND FILLED, BY SEX OF APPLICANTS, DURING FIVE WEEKS ENDING JULY 11, 1919.

Sex of applicants.	Average daily registrations.			Average daily vacancies notified.			Average daily vacancies filled.		
	Five weeks ending July 11, 1919.	Increase (+) or decrease (-) as compared with a—		Five weeks ending July 11, 1919.	Increase (+) or decrease (-) as compared with a—		Five weeks ending July 11, 1919.	Increase (+) or decrease (-) as compared with a—	
		Month ago.	Year ago.		Month ago.	Year ago.		Month ago.	Year ago.
Men.....	10,438	+125	+6,446	3,233	-241	-248	2,343	-113	-42
Women.....	4,232	+50	-940	2,371	-592	-625	1,413	-207	-1,096
Boys.....	874	+37	-19	546	-36	+8	382	-25	-47
Girls.....	808	+86	+36	509	-66	+60	329	-41	-6
Total.....	16,352	+298	+5,523	6,659	-935	-805	4,467	-386	-1,191

Compared with the previous month, the daily average of registrations showed an increase of 1.9 per cent, while the daily average of vacancies notified and vacancies filled showed percentage decreases of 12.3 and 8, respectively.

The table following shows, by the principal occupational groups, the number of individuals registered, the vacancies notified, and the vacancies filled, indicating the extent of unemployment in Great Britain during the five weeks ending July 11, 1919.

INDIVIDUALS REGISTERED, VACANCIES NOTIFIED, AND VACANCIES FILLED DURING FIVE WEEKS ENDING JULY 11, 1919.

Occupation groups. ¹	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.
Building.....	27,030	.....	18,827	.....	12,488	.....
Works of construction.....	5,679	.....	5,345	.....	4,378	.....
Engineering, shipbuilding, and construction of vehicles.....	58,254	2,668	20,534	1,500	14,430	1,265
Miscellaneous metal trades.....	3,004	1,627	2,421	704	1,704	520
Chemicals.....	1,540	631	963	403	859	371
Domestic service.....	12,268	34,041	2,609	37,221	1,643	19,646
Commercial and clerical.....	14,930	9,198	2,930	2,930	2,063	2,139
Conveyance of men, goods, and messages.....	41,774	1,521	7,646	767	6,163	547
Agriculture.....	6,111	2,174	3,467	2,190	2,159	1,462
Mining and quarrying.....	6,581	.....	1,274	.....	880	.....
Textiles.....	12,424	26,215	1,857	4,849	1,150	3,128
Dress (including boots and shoes).....	3,725	5,225	1,375	4,890	859	2,780
Food, tobacco, drink, and lodging.....	4,248	5,846	1,126	4,738	766	3,642
General laborers.....	57,271	11,310	13,220	1,060	11,623	971
All other trades.....	25,458	11,603	6,928	5,140	4,440	3,085
Total.....	285,297	112,059	90,522	66,392	65,605	39,556

¹ Persons are now registered at employment exchanges according to their normal occupation, or where there is no normal occupation, according to the work for which they are suitable.

In the principal occupational groups, 397,356 adults registered for work during the period—285,297 men and 112,059 women. There were 156,914 vacancies reported—90,522 men and 66,392 women. The number of positions filled was 105,161—65,605 men and 39,556

women. The occupational groups in which there were the largest number of positions filled were: Domestic service, 21,289, and engineering, shipbuilding, and construction of vehicles, 15,695.

As regards juveniles, there were 10,692 vacancies filled by boys, of which 2,272 were in engineering trades and 2,361 in conveyance of goods, etc.; and 9,227 vacancies filled by girls, of which 1,757 were in domestic service, 1,185 in commercial occupations, and 813 in dress.

The total number of positions filled by adults during the five weeks ending July 11, 1919, as compared with the preceding month, shows an increase of 7.5 per cent. The increase in the number of positions filled by men was 11.3 per cent; by women, 1.7 per cent.

Volume of Employment in the United Kingdom in July, 1919.

THE following figures as to the condition of employment in Great Britain and Ireland in July, 1919, as compared with June, 1919, and July, 1918, have been compiled from figures appearing in the British Labor Gazette for August, 1919. Similar information for April was published in the July MONTHLY LABOR REVIEW.

In July, 1919, as compared with June, 1919, relative to the number of persons employed, the largest increases, 16.2 per cent and 10.7 per cent, appear in building and construction of works and engineering trades, while respective increases of 5, 4.5, and 4.4 per cent are shown in seamen, the food preparation trades, and the cement trade. The largest decreases—12.2 and 5.9 per cent—appear in iron and steel and in the hosiery trade.

Comparing July, 1919, with June, 1919, on the question of earnings of employees, increases of 10.9, 10.5, and 10.4 per cent are shown in bleaching, printing, dyeing and finishing, the carpet trade, and the lace trade, respectively. Decreases of 12.9 and 7.6 per cent are shown in the hosiery and brick trades, respectively.

In comparing July, 1919, with July, 1918, as to the number of persons employed, dock and riverside labor shows an increase of 51.1 per cent; the cement trade, an increase of 49.4 per cent; and the printing trades, the food preparation trades, and quarrying, respective increases of 32.1, 28.8, and 28.5 per cent. The largest decreases—10.4, 8.4, and 6.6 per cent—appear in iron and steel, the hosiery, and the linen trades, respectively.

The aggregate earnings of employees in July, 1919, as compared with July, 1918, show more important changes. All but two are increases. Respective increases of 78.5 and 71.7 per cent are shown in the printing and the cotton trades. Sixteen trades show increases ranging from 22.5 per cent in the jute trade to 64.9 per cent in the cement trade, while the tailoring trades show an increase of 13.3

per cent. The hosiery and linen trades show decreases of 10 and 6.8 per cent, respectively.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN JULY, 1919, AS COMPARED WITH JUNE, 1919, AND JULY, 1918.

[Compiled from figures in the Labor Gazette, London, August, 1919.]

Industries and basis of comparison.	Per cent of increase (+) or decrease (—) in July, 1919, as compared with—		Industries and basis of comparison.	Per cent of increase (+) or decrease (—) in July, 1919, as compared with—	
	June, 1919.	July, 1918.		June, 1919.	July, 1918.
Coal mining:			Shirt and collar trade:		
Average number of days worked.....	— 1.2	—16.7	Number of employees.....	+ 1.9	+ 8.2
Number of employees.....	+ .2	+21.1	Earnings of employees.....	+ 2.9	+28.0
Iron mining:			Other clothing trades:		
Average number of days worked.....	—14.2	—20.5	Dressmaking and millinery—		
Number of employees.....	+ .6	— .5	Number of employees.....	— .5	+19.9
Quarrying:			Wholesale mantle, costume, blouses, etc.—Number of employees—		
Average number of days worked.....	+ 4.7	— 2.8	London.....	+ 1.0	+12.0
Number of employees.....	+ 2.1	+28.5	Manchester.....	— .1	— .6
Pig iron: Number of furnaces in blast.....	—14.1	—20.8	Glasgow.....	(2)	(3)
Iron and steel works:			Corset trade—Number of employees.....	+ .4	+ 4.7
Number of employees.....	—12.2	—10.4	Building and construction of works: Number of employees ¹	+16.2	(2)
Number of shifts worked.....	—15.4	—15.6	Woodworking and furnishing: ²		
Engineering trades: Number of employees ¹	+10.7	(2)	Number of employees.....	+ .2	(2)
Shipbuilding trades: Number of employees ¹	+ .4	(2)	Brick trade:		
Tin plate, steel, and galvanized sheet trades: Number of mills in operation.....	+ .7	+42.5	Number of employees.....	+ 1.5	+27.7
Cotton trade:			Earnings of employees.....	— 7.6	+51.2
Number of employees.....	+ 3.4	+14.7	Cement trade:		
Earnings of employees.....	+ 8.5	+71.7	Number of employees.....	+ 4.4	+49.4
Woolen trade:			Earnings of employees.....	— .1	+64.9
Number of employees.....	+ .9	+ 5.8	Paper, printing, and bookbinding trades:		
Earnings of employees.....	+ .4	+33.4	Paper trades—		
Worsted trade:			Number of employees reported by trade-unions..	(2)	(2)
Number of employees.....	+ 1.3	+10.2	Number of employees reported by employers...	+ 1.5	+ 7.3
Earnings of employees.....	+ 4.8	+40.4	Earnings of employees reported by employers...	+ 3.8	+36.0
Hosiery trade:			Printing trades—		
Number of employees.....	— 5.9	— 8.4	Number of employees reported by trade-unions ³	+ .1	— .8
Earnings of employees.....	—12.9	—10.0	Number of employees reported by employers...	+ 3.2	+32.1
Jute trade:			Earnings of employees reported by employers...	+ 5.5	+78.5
Number of employees.....	+ .7	+ 5.0	Bookbinding trades—		
Earnings of employees.....	+ 6.3	+22.5	Number of employees reported by trade-unions ³	— .2	— 2.7
Linen trade:			Number of employees reported by employers...	+ .8	+16.2
Number of employees.....	+ .8	— 6.6	Earnings of employees reported by employers...	— 1.8	+40.3
Earnings of employees.....	+ 6.3	— 6.8	Pottery trade:		
Silk trade:			Number of employees.....	+ 1.5	+ 7.1
Number of employees.....	+ 1.0	+ 7.7	Earnings of employees.....	+ .3	+32.6
Earnings of employees.....	+ 3.5	+30.0	Glass trades:		
Carpet trade:			Number of employees.....	+ 2.4	+20.2
Number of employees.....	+ 2.5	+20.0	Earnings of employees.....	+ 5.5	+40.7
Earnings of employees.....	+10.5	+50.0	Food preparation trades:		
Lace trade:			Number of employees.....	+ 4.5	+28.8
Number of employees.....	+ 4.2	+ 7.9	Earnings of employees.....	+ 6.7	+61.2
Earnings of employees.....	+10.4	+28.5	Dock and riverside labor: Number of employees.....	+ 1.6	+51.1
Bleaching, printing, dyeing, and finishing:			Seamen: Number of employees...	+ 5.0	+ 8.3
Number of employees.....	+ 1.0	+ 7.9			
Earnings of employees.....	+10.9	+42.7			
Boot and shoe trade:					
Number of employees.....	+ .8	+13.3			
Earnings of employees.....	+ 1.2	+37.1			
Leather trades: Number of employees ³	— .1	— .7			
Tailoring trades:					
Number of employees.....	+ 2.5	+ 5.8			
Earnings of employees.....	+ 2.0	+13.8			

¹ Based on out-of-work donation policies.

² No report.

³ Based on employment.

Labor Exchanges in France, 1911 to 1918.¹

Compiled by ALBERT E. CONOVER.

PRIOR to March 14, 1914, employment exchanges in France were entirely in the control of private enterprises and operated on a commercial basis. By a decree of March 25, 1852, these exchanges were placed under a form of supervision, but even though under police control their methods and exactions caused protest, manifestations and even strikes and violent expressions of discontent. During the next 50 years various steps were taken to remedy these conditions. A committee for the suppression of private labor exchanges was formed in 1891, and agitations for the abolishment of privately operated exchanges became general.

This led to the passage of the law of March 14, 1904, and subsequently to that of December 28, 1910, which provided for the suppression, upon the payment of a just indemnity, of all offices charging fees for their services. The Council of Paris paid 1,608,000 francs (\$310,344) as compensation to managers of suppressed exchanges, which immediately resumed operations under the form of associations of employers, of employees, or of both, or other associations with more or less fictitious titles. Thereafter it was necessary only to file a simple declaration with the prefect stating with but few formalities that an association had been formed as provided by law, and then open an office. The method of operation in general was for exchanges to offer employers their services without charge and to notify laborers that a free employment office was opened, promising them good positions upon the payment of an entrance fee and the regular payment of dues into the association.

The law provided that no "proprietor of a hotel, lodging house, restaurant, or place where drinks are sold shall add to his establishment a labor exchange." Nevertheless many of these associations found it convenient to make such places their headquarters, and the proprietors found it profitable to provide a suitable office for their use. Because of its lax provisions the law was a complete failure, and the abuses previously existing became more acute.

This law also required each commune of 10,000 or more inhabitants to establish a free labor exchange. According to the census of 1906 there were 258 cities in France having the required number of inhabitants. An investigation developed the fact, however, that 132 cities had not conformed to the law. In some cities the activities of these exchanges consisted only in keeping a register of applicants for employment and notices of vacancies. It was evidently the intention of the legislature to differentiate between simple registry

¹ Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris, 1910 to 1919.

service and an exchange, since each city, without regard to its population, was required to maintain a registry of such factors.

In 1909 there were but 107 cities, including Paris, in which municipal labor exchanges were in operation. For that year 88,752 positions were filled, 45,261 of them being in Paris. The Minister of Labor in his letter of March 14, 1910, addressed to the prefects, calls attention to the unsatisfactory service of the exchanges then existing, as follows: "Exchanges are in operation in 107 cities. But what is the result of their operation? In 97, or 91 per cent of them, the number of positions filled during the entire year of 1909 is less than 1,000 (each); in 73, or 69 per cent, less than 300; in 48, or 45 per cent, less than 100." The expenses for the operation of these exchanges were provided by municipal subsidy, dues of members, donations, etc., and under certain conditions the State, through the office of the Minister of the Interior, paid certain portions of the operating expenses. Generally speaking, however, the only fund available for such expenses was the municipal subsidy. In 1909 but four of these exchanges were allowed any portion of the State appropriation for this purpose, the total amount of such aid for the year being but 1,650 francs (\$318.45).¹ The details of the method of establishing, financing, and operating this class of exchanges are given in the French Labor Bulletin of September, 1910.

When the second investigation of labor exchanges was undertaken in 1909, 464 exchanges conducted by employers were found in operation, 339 of which furnished reports of operations. Of this number, 197 reported having obtained employment for 315,455 persons during the year, 267,780 of whom were credited to 70 exchanges in Paris and 47,675 to the departmental exchanges; 127 reported that they had secured no positions for employees, 8 made incomplete reports, and 7 reported the number of applications and requisitions only. During the same year there were 20 municipal exchanges in Paris which found employment for 45,261 persons, and 106 in other cities which found employment for 43,491 persons.

Besides these, there were in operation 214 associations composed of both employers and employees which performed the duties of labor exchanges. These reported having secured employment for 78,252, and if to these be added the 2,827 positions secured by associations placing less than 10 persons each per month the total number of positions filled by such associations would be 81,079. Mutual aid societies to the number of 85 reported that through their activities employment was secured for 133,001 persons. Of the trade-unions addressed, 7 reported that through their activities 2,681 persons had found employment. Charitable and aid societies reported having

¹ In all conversions into United States money in this article 1 franc is considered as 19.3 cents.

placed 33,871 persons, and other institutions had found employment for 57,714 persons.

Operation of Free Labor Exchanges from 1911 to the Beginning of the War.

The decree of October 15, 1911, provides for State aid to free labor exchanges having been in operation at least three months and directed by a committee composed of an equal number of employees and employers, and with a president belonging to neither of these classes. Such aid is extended only to one exchange in a commune. Regular reports of operations are required, and regulations must be approved by the Minister of Labor. In case a strike or lockout is in progress in any establishment seeking employees, no persons shall be sent to fill vacancies unless they are duly notified of such conditions. The amount of State aid is determined by the number of positions filled during the six months next preceding the date of distribution, which is made semiannually.

Distribution of the appropriation is made as follows: To exchanges having filled 25 to 50 positions per month 15 per cent of expenses of operation, the minimum, the maximum being 30 per cent to those having filled 201 or more positions. This basis was later modified. If positions are filled by interlocal service between neighboring communes an extra allowance of one-half of the expenses incurred in such service is allowed.

Reports must be submitted to the Minister of Labor showing the number of applications filed, vacancies reported, positions filled, and the expenses incurred in operating the exchange. All expense accounts are subject to the approval of the minister. The distribution is under the supervision of a commission designated by the minister. The appropriation for the first year was 35,000 francs (\$6,755).

The local governing board may be designated from the members of the trade council, members of employers' and employees' associations, or in any other manner so long as it consists of equal numbers of employers and employees, and also in so far as possible members of the board shall be selected from that occupation vacancies in which the exchange will most frequently be called upon to fill.

The manner of presentation of the results of various investigations of exchanges is not uniform, but the data secured show that the number of positions filled increased from year to year. The employees' and mixed (*paritaires*) associations filled 78,252 positions in 1909 and 86,909 in 1910; the municipal bureaus 79,387¹ in 1909 and 83,810 in 1910.

¹ Not including certain positions temporarily filled.

These are the only classes for which individual reports are obtainable for these years. The following table shows the number of positions filled by five classes of free exchanges in 1911:

POSITIONS FILLED BY FREE LABOR EXCHANGES IN FRANCE IN 1911.

Class of exchanges.	Men.		Women.		Total.
	Paris.	Outside of Paris.	Paris.	Outside of Paris.	
Employers.....	196,567	42,801	79,903	5,480	324,751
Employees.....	132,064	93,164	6,795	12,151	244,174
Mixed.....	97,903	23,596	4,689	1,939	128,127
Municipal.....	21,109	17,577	35,226	25,421	99,333
Others.....	6,338	4,558	4,510	1,076	16,482
Total.....	453,981	181,696	131,123	46,067	812,867

There were 754 exchanges reporting for the year 1911, of which 686 furnished reports of their operations. Of these, 379 received subsidies either in money or other form, 155 being in receipt of aid from public funds as follows: 111 from the commune, 31 from the Department, 10 from the State, and 3 from other sources. During the same year there were in operation 736 offices charging fees for securing employment for applicants, 27 of these being in Paris. The 736 offices reported that they had filled 357,129 positions. The number of such offices is ever increasing, but their activities are more especially confined to the placing of domestic servants.

No data are available for the various exchanges as a whole after this date. The only figures obtainable refer to the two classes designated as employees' and mixed (*paritaires*) and municipal exchanges. The number of positions filled by the former for the year 1912 was 85,048; for 1913, 95,535; and for the six months from January to June 30, 1914, 49,302.

Beginning with 1911 the reports show the operations of municipal exchanges which participated in the distribution of the State fund. For that year there were 10 municipal exchanges receiving State aid. The results obtained by this class of exchanges from 1911 to 1914 are shown in the following table:

OPERATIONS OF MUNICIPAL EXCHANGES RECEIVING AID FROM THE STATE, 1911 TO 1914.

Year.	Vacancies reported.	Applications for employment.	Positions filled.	Number of exchanges reporting.
1911 ¹			12,619	10
1912.....	31,315	31,657	21,420	25
1913.....	47,361	48,615	29,692	32
1914.....	27,448	39,757	22,465	21

¹ From July to December, inclusive.

The larger part of the 22,465 positions filled in 1914 was during the first seven months. A marked decrease was reported in August, which continued through the subsequent months. The refugees from Belgium together with the unemployed from the northern and eastern districts of France, seeking Paris as a shelter, made necessary greater exertions on the part of public officials in securing employment. Many vacancies due to mobilization were reported, and it became apparent that in order to bring the unemployed and the establishment in need of employees in contact an organization must be established having a wider field of action.

Organization of Central Office for Placing Unemployed and Refugees.

The Central Office for Placing Unemployed and Refugees, having its office in Paris, was created October 26, 1914. Its operations were placed under the joint supervision of the Minister of Labor and the Minister of the Interior. During the period October, 1914, to the close of 1915 its efforts were directed to securing positions by direct relations with employers. Its field of action covered the entire country. Its essential duties consisted in collecting data relative to the number of unemployed persons and to the demands for employees in all sections, by occupations, so that sudden calls for labor in any considerable number might be quickly supplied. As time passed the demands for labor increased more rapidly than applicants increased. Unemployment, in so far as it may be considered as an economic factor, disappeared. Departmental offices multiplied and endeavored to secure a judicious distribution of available labor. Because of the new conditions the activities of the Central Office as an office for securing positions for the unemployed decreased and its efforts were directed to securing a supply from the French colonies and from foreign countries. It thus found its true position as a labor exchange. Early in its activities it established relations with various associations employing a large number of persons and became an important factor in supplying help to the various branches of the Government. It was thus in position to be of valuable service in 1916 and later when the demands for labor became a problem of paramount importance.

Under its direction were prepared model contracts as between the State and each colonial laborer, and between the State and employers of labor. These contained clauses stipulating the wages, hours of labor, other wage regulations, night work, rest days, character of food and lodging to be furnished, and also provisions for care in case of sickness or accident. Up to December 1, 1916, it is estimated that through its efforts there were 191,700 colonial and foreign laborers employed in industry, commerce, and agriculture in France. Of

these, 130,700 were foreigners—Greeks, Italians, Portuguese, Spanish, Chinese, Serbians, etc.

Its operations are confined almost exclusively to skilled labor in the more important industries. It may authorize the transportation of laborers and even of laborers' families at reduced fare when sent from one district to another in anticipation of employment. It is national in scope and supposed to be in constant and immediate touch with labor conditions in the entire country.

This plan of a central office met with good results, even in its earlier period of operation. During the first two months the exchange placed 14,852 skilled workmen in industrial establishments. From November 5, 1914, to April 20, 1915, it filled requisitions made by employers for 33,837 workmen. After this date comparable figures are not available because many of the employers' associations were placed by the Central Office in direct negotiation with bodies of unemployed persons and results were not reported. Also, the figures do not include agricultural laborers. The following table shows its operations in connection with agricultural employees for five months, March to July, 1915:

OPERATIONS OF THE CENTRAL LABOR EXCHANGE IN SUPPLYING AGRICULTURAL LABOR, MARCH TO JULY, 1915.

Month.	Vacancies reported.	Applications for employment.	Persons recommended.	Positions reported filled.
Mar. 15 to Apr. 30.....	5,847	* 2,817	2,194	924
May.....	3,256	1,602	3,196	1,281
June.....	2,621	2,220	4,053	1,601
July.....	764	2,486	5,225	2,212
Total.....	12,488	9,125	14,668	6,018

With certain reservations it may be stated that from November 5, 1914, to October 31, 1915, 48,497 positions were filled, including agricultural workers above mentioned, but excluding positions obtained through the office of the committee of iron works.

Establishment of Departmental Labor Exchanges.

Beginning with January, 1915, a different system was adopted for reporting the results. For various reasons many of the Departments during the last half of 1914 established labor exchanges which aimed to provide for the employment of refugees and persons thrown out of work because of the closing of factories, etc. While there was no specific legislation providing for such exchanges, they none the less became valuable adjuncts to those already existing. From No-

vember, 1914, to January, 1915, reports are fragmentary and can not in any sense be considered as showing the extent of operations. The decree of March 12, 1916, established a new basis for distributing State aid to labor exchanges. All departmental and municipal exchanges providing free service participate in the distribution, provided they comply with certain regulations and place 25 or more persons per month. The general fund is distributed as shown by the following schedule:

Proportion of expenses reimbursed by the State to exchanges securing the employment of each specified number of persons.

25 to 50 persons per month.....	20 per cent.
51 to 100 persons per month.....	25 per cent.
101 to 200 persons per month.....	30 per cent.
201 to 500 persons per month.....	35 per cent.
Over 500 persons per month.....	40 per cent.

In addition not more than 50 per cent of postal and interurban telephone and telegraph expenses is allowed in securing employment of persons residing outside of the exchange district; 50 per cent of expenses for board and lodging is allowed when exchange representatives are engaged outside of the exchange district.

These exchanges are supported in general by municipal or departmental appropriations, the total of which has increased from year to year as the number of exchanges has increased and their operations and importance have become more apparent.

When first established the State bears 20 per cent of the initial cost incurred for installing a municipal or departmental exchange, up to a maximum of 5,000 francs (\$965).

For the year 1917 the total appropriations for the aid of exchanges were reported as being 594,280 francs (\$114,696); in 1918, so far as reported up to July, 861,684 francs (\$166,305), and so far as reported up to March 15, 1919, for the current year, 1,556,421 francs (\$300,389).

The increase seems to be due, to some extent at least, to the establishment of district (*regionaux*) offices, which have been in operation since January 1, 1918. These are not directly charged with the filling of vacancies or the securing of employment, but act more particularly as aids to the local exchanges in guiding and stimulating their activities. Only when the local service is insufficient does the district office act directly between the employer and the applicant. In meeting the needs of the allied armies in 1918 the value of these district offices was demonstrated.

The following table shows the number of positions filled by the municipal and departmental exchanges, July 1, 1915, to June 30, 1918:

NUMBER OF POSITIONS FILLED BY FREE LABOR EXCHANGES IN FRANCE, JULY, 1915,
TO JUNE 30, 1918.

Period.	Positions filled—		
	By municipal exchanges.	By departmental exchanges.	Total.
July 1 to Dec. 31, 1915.....	50,854	7,138	57,992
Jan. 1 to June 30, 1916.....	60,037	13,839	73,876
July 1 to Dec. 31, 1916.....	49,244	38,194	87,438
Jan. 1 to June 30, 1917.....	29,695	65,915	95,610
July 1 to Dec. 31, 1917.....	31,551	66,791	98,342
Jan. 1 to June 30, 1918.....	18,577	¹ 109,352	127,929

¹ It will be noted that there is a small discrepancy in the total placements in departmental exchanges for the period Jan. 1 to June 30, 1918, shown in this table and those shown for exchanges of the Department of the Seine and other Departments for the same six months' period on page 203. These figures were taken from the Bulletin du Ministère du Travail et de la Prévoyance Sociale January-March, 1919, p. 27, while the other table is given in the report, La Constitution de l'Office Départemental du Placement et de la Statistique du Travail de la Seine, 1918, pp. 89, 90.

It is noted that the number of positions filled by the municipal exchanges has decreased since the departmental exchanges have been in operation. While this may be due to some extent to the decreasing number of municipal exchanges, it can not be attributed entirely to that cause. The activities of the municipal exchanges in general are limited to a few occupations in the smaller towns and rural districts, while the departmental operations cover a wider range of occupations and trades.

Operations of Public Labor Exchanges in the Department of the Seine.¹

Labor exchanges established under the law of 1904 (art. 4) in each commune of 10,000 inhabitants were required to maintain lists of persons making application for employment and of demands of employers for laborers. The exchange was to be located in the office of the mayor and open to the public without charge.

There are 76 communes, including Paris, in the Department of the Seine. The greater number of these have an exceedingly dense population. They are separated in many cases merely by the width of the street, and the economic life of each commune is strictly interdependent upon its neighbors, with Paris as the nucleus. The establishment, therefore, of 76 independent bureaus would naturally fail to secure efficient organization.

As shown by reports made by the exchanges in the 20 wards (*arrondissements*) of Paris for the first few months of the war, the results were unsatisfactory. The number of persons placed in July, 1914, was 3,028; from August to December, 1914, 8,675; in January,

¹ Constitution de l'Office Départemental du Placement et de la Statistique du Travail de la Seine. Paris, 1918.

1915, 1,845, and in February, 1915, 2,020. During January and February of 1915 the average number of unemployed was reported as being 429,701. The number of positions filled during the last 2 months was but 9 per 1,000 of the unemployed.

Such was the condition in 1915 when the Minister of Labor and Social Welfare addressed a letter to the various Departments urgently requesting that a mixed commission be appointed in each charged with the duty of investigating and reporting "for each industry of the district the measures which to it seemed immediately adaptable to hasten the early return to normal economic conditions; of considering methods of recruiting of laborers, the supply of raw materials and of markets in need of manufactured goods, in so far as the labor market is concerned, to consider the establishment of a departmental labor exchange, in direct contact with the municipal bureaus, unemployment funds, and employers' and employees' associations."

The Department of the Seine on March 15, 1915, established a commission. Its report to the General Council of the Seine led to the establishment of a departmental labor exchange and statistical bureau.

An account of the operations of the then existing bodies engaged in placing the unemployed is but a repetition of the history of other States and countries in which such a system had been firmly established. It suffices to say that Paris before the war was the one European capital in which the situation was most unsatisfactory. Outside some private or public exchanges which took an interest in such service the business of placements was in the control of a commercially organized system. The reluctance of the workers and employers to utilize the organizations composed exclusively of the other interested party was reciprocal. The employers feared to establish a situation in which laborers could be obtained only through unions, and the employees believed that employers' agencies were being used to decrease wages. While these opinions may have been without foundation in fact, they were nevertheless of sufficient importance to make it advisable to organize a system of exchanges operated by associations in which the management was neutral.

Organization of the Departmental Office.

The departmental office was organized on the lines pointed out by the general council of the Department, which enacted regulations making it not only a medium for remedying the temporary conditions of the labor market, but gave it the status of a permanent organization. It was directed to make an immediate census of all available labor by occupations, to classify the results in such a way that they could be easily revised each month, and to coordinate public and private

efforts in the maintenance of an equilibrium in the labor market. Under the supervision of the general council and the prefectural administrations the results of the monthly censuses were to be centralized and the method of securing positions for the unemployed systematized in all the districts of Paris. The office was to be under the charge of the president of the French Association for the Prevention of Unemployment, or in default of this, some member of that association.

The administrative commission is composed of two members elected from the general council, three employers, three employees, two representatives of the Ministry of Labor, one representative of the prefect of the Seine, and one employer and one employee elected by each of the municipal trade exchanges. Meetings are required to be held at least once each month. An executive committee of five members shall meet weekly. The General Council of the Seine shall provide for the expenses in its regular annual budget. Annual reports are required to be presented. Such trade exchanges may be established as shall be deemed necessary, subject to the jurisdiction of the administrative commission. These exchanges shall be under the control of a committee composed of an equal number of employers and employees (*paritaires*) elected by the licensed employers and wage earners. Their regulations are subject to the approval of the departmental office.

The general section began operations in November, 1915, and has since grown rapidly in importance. At present the number of positions being filled through its activities vary from 4,000 to 5,500 per month. Since its formation its general scope has been somewhat diminished by reason of the establishment of local exchanges, special sections, and sections placed under the supervision of other agencies in the office of the Ministry of Labor. From November, 1915, to October 30, 1918, there were 35,109 positions filled by this section.

Special Sections.

Where there have been no mixed (*paritaires*) trade exchanges established, and no early establishment of such exchanges anticipated, special trade sections have been constituted under the direct control of the executive committee, and under the same plan of operation as that of the general section, of which they form a part. The principal special sections created are: Laborers; domestic, hotel service, etc.; office employees, stablemen, and warehousemen; metallurgical; and women in war industries.

Laborers' section.—The campaign of publicity carried on by the departmental office resulted in drawing great numbers of unskilled laborers to that office. For several days, each morning found the

waiting room, stairs, and vicinity of the building crowded with unemployed, both men and women. A section was demanded to care for this numerous class, and one was constituted and began operations in October, 1916. This section placed 36,544 unemployed persons in positions from October, 1916, to October, 1918. Until the end of December, 1917, it served all the various nationalities, but since that date a special section has been caring for foreign labor.

Domestic, hotel service, etc., section.—Notwithstanding certain conditions which hampered the work of this section, it filled 7,228 positions from January, 1917, to October, 1918.

Office employees, stablemen, and warehousemen's section.—The creation of the laborers' section proved so successful that the administrative commission decided to create new trade sections whenever it seemed advisable so to do. As the work of the exchanges under the supervision of the mayors of Paris naturally decreased in proportion as the services of the general section became better known and more appreciated, it was considered necessary to discover some method of restoring the usefulness of these exchanges. This was accomplished by making them dependent upon the departmental office. The result has been satisfactory, and as special exchanges for the employment of warehousemen, office help, drivers and draymen, grooms, etc., they have placed 3,884 persons in employment since December, 1917.

Metallurgical section.—This section was created with the view of further lightening the burden of the general section, to which great numbers of applications were coming. From April to October, 1918, this section placed 1,992 metal workers in positions.

Women in war industries section.—This was established in order to obviate duplication of registration with exchanges under the Minister of Armament and with the departmental office. It has furnished employment to 3,045 woman workers since March, 1918.

Trade Exchanges.

Trade exchanges (*bureaux paritaires*) are organized by an agreement between employers and employees. Great care is taken to preserve their character of impartiality. The governing board is composed of an equal number of members elected by the respective interests, and the presiding officer belongs to neither interest. The exchanges are directed to receive demands for labor from employers' associations and to send employees directly to the office of the employer, and not to the association making the requisition, in order to avoid any suspicion of recruiting labor through private exchanges.

Exchanges thus organized have already been placed in operation in many trades. In the clothing trades 29,666 persons have been placed; in the restaurants 16,947 have been placed.

Services Under the Direction of the Minister of Labor.

In addition to the departmental and trade exchanges an employment service is maintained in the office of the Minister of Labor. The minister created both a central and a district (*regional*) office, the first to establish relations and secure coordination with the entire country, and the second with neighboring Departments.

In addition to its other duties the district office is charged with the duty of securing employment for foreigners, for persons suffering from injuries received in the war, and for female laborers in public and private administrative offices; and the central office is charged with the recruitment of labor (national, foreign, and colonial) necessary to supply the requirements of industry, commerce, and agriculture.

The following table shows the importance of the operations of the office of the Department of the Seine, as compared with labor exchanges of other Departments, for the first half of the year 1918:

NUMBER OF POSITIONS FILLED BY THE OFFICE OF THE DEPARTMENT OF THE SEINE AND OF OTHER DEPARTMENTS, BY SEX, DEC. 31, 1917, TO JUNE 29, 1918.

Four-week periods.	Department of the Seine.			Other Departments.			Grand total.
	Males.	Females.	Total.	Males.	Females.	Total.	
First quarter:							
Dec. 31 to Jan. 26.....	1,909	1,624	3,533	2,898	2,536	5,434	8,967
Jan. 28 to Feb. 23.....	2,204	1,992	4,196	3,856	3,774	7,630	11,826
Feb. 25 to Mar. 30 ¹	3,097	2,178	5,275	6,725	5,778	12,503	17,778
Total.....	7,210	5,794	13,004	13,479	12,088	25,567	38,571
Second quarter:							
Apr. 1 to Apr. 27.....	4,156	2,072	6,228	7,188	6,155	13,343	19,571
Apr. 29 to May 25.....	4,378	2,598	6,976	8,290	5,967	14,257	21,233
May 27 to June 29 ¹	6,580	3,171	9,751	12,378	9,690	22,068	31,819
Total.....	15,114	7,841	22,955	27,856	21,812	49,668	72,623
Total, 6 months.....	22,324	13,635	35,959	41,335	33,900	75,235	² 111,194
Weekly average:							
First quarter.....	555	445	1,000	1,036	930	1,966	2,967
Second quarter.....	1,162	603	1,765	2,143	1,677	3,820	5,586
6 months.....	859	524	1,383	1,589	1,304	2,893	4,277

¹ Five-week period.

² See p. 199, footnote 1.

It will be seen by this table that the office of the Department of the Seine has placed about one-third of the persons for whom positions were secured, and that there has been a steady increase in the importance of the service in the Department of the Seine as well as in all other Departments.

The total number of persons placed during the week ending January 5, 1918, is reported as being 1,563—606 through the office of the Department of the Seine and 957 by the other Department offices—and for the week ending June 29, 1918, 7,083—1,983 by the office of the Department of the Seine and 5,100 by the other Department offices. This was a total increase of 353 per cent, the increase for the Department of the Seine being 227 per cent and for the other Departments 433 per cent.

Results of the Operations of the Office of the Department of the Seine, November, 1915, to October, 1918.

In order to show the growing importance of the exchanges the following table is presented, giving detailed monthly data for the first year of operation and total for each of the last two years. It should be said, however, that each item shows a continuous and practically unvarying ratio of increase from month to month throughout the entire period of the three years of operation.

The table shows the number of applications made for employment, vacancies reported, recommendations to positions, results of such recommendations (positions known to have been filled, failure, and results unknown), and per cent of positions filled:

OPERATIONS OF THE OFFICE OF THE DEPARTMENT OF THE SEINE, NOVEMBER, 1915, TO OCTOBER, 1918.

Year and month.	Applications for work.			Vacancies reported.			Persons recommended.		
	Males.	Fe-males.	Total.	Males.	Fe-males.	Total.	Males.	Fe-males.	Total.
1915.									
November.....	926	1,716	2,642	619	215	834	458	218	676
December.....	1,689	2,510	4,208	1,669	524	2,193	1,314	672	1,986
1916.									
January.....	1,870	1,852	3,722	1,379	559	1,938	1,074	606	1,680
February.....	1,773	1,606	3,379	1,303	784	2,087	1,160	806	1,966
March.....	1,946	1,957	3,903	1,540	1,114	2,654	1,396	859	2,255
April.....	1,395	1,581	2,976	1,225	898	2,123	1,479	774	2,253
May.....	1,561	1,910	3,471	2,118	850	2,968	1,594	854	2,448
June.....	1,689	2,339	4,028	1,780	1,328	3,108	1,731	1,526	3,257
July.....	1,909	2,160	4,069	1,827	1,511	3,338	2,021	1,578	3,599
August.....	2,123	2,117	4,240	2,387	1,936	4,323	2,348	1,861	4,209
September.....	1,787	2,066	3,853	1,773	1,646	3,419	1,919	1,863	3,782
October.....	2,301	1,942	4,243	2,561	1,602	4,163	2,305	1,821	4,126
Total (Nov., 1915, to Oct., 1916).....	20,969	23,756	44,734	20,181	12,967	33,148	18,799	13,438	32,237
Nov., 1916, to Oct., 1917.....	64,988	83,570	148,558	34,644	43,337	77,981	60,395	48,144	108,539
Nov., 1917, to Oct., 1918.....	113,374	126,281	239,655	57,986	59,531	117,517	96,455	68,565	165,020
Grand total.....	199,331	233,607	432,947	112,811	115,835	228,646	175,649	130,147	305,796

OPERATIONS OF THE OFFICE OF THE DEPARTMENT OF THE SEINE, NOVEMBER, 1915, TO OCTOBER, 1918—Concluded.

Year and month.	Positions filled.			Failed.	Results unknown.			Per cent positions filled were—		
	Males.	Fe-males.	Total.		Males.	Fe-males.	Total.	Of ap-plica-tions.	Of va-can-cies.	Of rec-om-men-da-tions.
1915.										
November.....	50	50	100	513	50	13	63	3.7	11.9	14.8
December.....	174	121	295	1,428	200	63	263	7.0	13.4	14.8
1916.										
January.....	200	109	309	931	242	198	440	8.3	15.9	18.2
February.....	273	179	452	1,137	213	164	377	13.3	22.1	23.0
March.....	409	261	670	1,170	214	201	415	17.4	25.2	29.7
April.....	418	258	676	925	452	200	652	22.7	31.1	30.0
May.....	513	313	826	914	376	332	708	23.7	27.4	33.7
June.....	576	538	1,114	1,507	316	320	636	27.8	35.8	34.2
July.....	770	621	1,391	1,575	418	215	633	34.1	41.7	38.8
August.....	873	600	1,473	2,185	223	328	551	34.7	34.0	35.0
September.....	926	719	1,645	1,571	328	238	566	42.9	48.1	43.5
October.....	1,122	713	1,835	1,489	547	255	802	43.5	44.0	44.5
Total (Nov., 1915, to Oct., 1916).....	6,304	4,482	10,786	15,345	3,579	2,527	6,106	24.1	32.5	33.4
Nov., 1916, to Oct., 1917.....	24,817	19,435	44,252	43,234	12,016	9,037	21,053	29.7	56.7	40.7
Nov., 1917, to Oct., 1918.....	52,246	36,508	88,754	60,539	10,457	5,270	15,727	37.0	75.5	53.8
Grand total.....	83,367	60,425	143,792	119,118	26,052	16,834	42,886	33.2	62.9	47.0

The number of recommendations to positions is greater than the number of vacancies reported, because in some cases more than one recommendation may have been made for a given vacancy. The number of positions filled must be considered as a minimum, as such data include only those positions concerning which positive replies have been received. It is probable that many positions were filled of which no notice has been given by either party.

There were 1.3 recommendations issued for every vacancy reported. The number of positions known to have been filled was 33.2 per cent of the number of applications, 62.9 per cent of the vacancies reported, and 47 per cent of the recommendations issued.

The following detailed table shows the operations of the exchange by industries during the month of October, 1918:

OPERATIONS OF THE OFFICE OF THE DEPARTMENT OF THE SEINE, OCTOBER, 1918, AND SUMMARY FOR OCTOBER, 1916 AND 1917.

Industry.	Applications.		Vacancies.		Recommendations.		Positions filled.		Unknown.	
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.
Agriculture.....	33	.....	43	.....	17	.....	8	.....	1	.....
Mining.....	5	.....	1	.....	4	.....	.....	.....	2	.....
Food preparations.....	44	5	14	6	19	9	12	3	3	.....
Chemical.....	.....	.....	1	.....	1	.....	1	.....	.....	.....
Rubber, paper, cardboard.....	37	25	23	62	13	25	3	10	1	1
Printing and publishing.....	103	1	29	7	31	1	9	.....	1	1
Textiles and cloth.....	9	24	13	49	3	29	2	6	.....	5
Leather and hides.....	33	14	15	25	27	12	15	7	2	2
Woodworking.....	449	4	404	3	371	5	330	3	21	.....
Metals, fine.....	8	8	18	12	7	8	2	4	.....	1
Metals, base.....	1,431	.....	502	.....	973	.....	391	.....	123	.....
Pottery and glass.....	6	1	16	5	2	1	2	.....	.....	.....
Building (construction).....	464	.....	328	.....	294	.....	287	.....	7	.....

OPERATIONS OF THE OFFICE OF THE DEPARTMENT OF THE SEINE, OCTOBER, 1918,
AND SUMMARY FOR OCTOBER, 1916 AND 1917—Concluded.

Industry.	Applications.		Vacancies.		Recommendations.		Positions filled.		Unknown.	
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.
Transportation.....	97		83		99		33		12	
Warehousemen, ¹ etc.....	678	58	554	58	773	52	352	38	10	
Commerce.....	694	744	189	260	356	483	119	170	26	40
Domestics.....	208	431	114	1,316	187	706	70	264	4	18
Personal service.....	4	2	1		2	2	1	1		
Laborers ²	3,283		1,640		3,438		1,465		212	
Cooks ²		2,124		724		1,133		524		153
Laborers, etc., skilled.....	596	1,234	195	508	460	727	178	338	22	76
Others.....	90		21	2	28		10	1	3	
Total.....	8,272	4,675	4,203	3,037	7,105	3,193	3,290	1,369	450	297
Total, males and females.....	12,947		7,240		10,298		4,659		747	
Clothing.....	305	3,628	150	3,116	148	2,548	69	1,122	30	214
Restaurants and soft drinks.....	2,812	3,385	1,629	2,120	1,530	2,047	1,466	2,030		
Public service.....		2,279		470		1,063		448		
Foreign laborers:										
Building (construction).....	230		(³)		230		230			
Laborers.....	810		(³)		810		549		261	
Total.....	1,040				1,040		779		261	
Grand total.....	12,429	13,967	5,982	8,743	9,823	8,851	5,604	4,909	741	511
Total, males and females.....	26,396		14,725		18,674		10,573		1,252	
October, 1917.....	14,510		8,345		10,984		4,598		1,568	
October, 1916.....	4,243		4,163		4,126		1,835		812	

¹ One arrondissement.² One exchange.³ Unlimited.

Cost of Unemployment and of the Operation of the Departmental Office.

The total expenditures of the exchanges in the Department of the Seine for the fiscal years of 1915, 1916, and 1917 were as follows: 19,827.68 francs (\$3,826.74), 62,801.64 francs (\$12,120.72), and 111,160.64 francs (\$21,454), respectively. The expenses incurred per position filled in the three years, respectively, were: 50.19 francs (\$9.69), 3.85 francs (74.3 cents), and 2.37 francs (45.7 cents).

At the time the office was established there were 93,840 persons in receipt of unemployment benefits amounting to 1,648,994 francs (\$318,255.40) for the two-week period October 28 to November 12, 1915. For the corresponding period in 1916 there were 41,305 such beneficiaries, in receipt of 723,025 francs (\$139,543.83); in 1917, 16,624 beneficiaries, in receipt of 273,200 francs (\$52,727.60); and in 1918, 9,440 beneficiaries to whom 168,374 francs (\$32,496.18) was paid. The total expenses of the city of Paris for unemployment benefits as compared with the period ending November 12, 1915, showed a decrease of 56 per cent in same two weeks in 1916, 83 in 1917, and 89 per cent in 1918.

EMPLOYMENT MANAGEMENT.

Relations Between Employer and Employee.

By WM. M. LEISERSON.

I. Labor Relations Analyzed.

TWO sets of labor relations must be clearly distinguished in any plan or policy of labor administration for industrial enterprises: (1) Personal relations—the management problem; (2) Economic relations—democracy problem. The first presents the problem of dealing with the human element that goes into production, with due regard for feelings, instincts, prejudices, ambitions, and ideas of their own worth that wage earners, like all other human beings, have. The second is an entirely different problem, having to do with the division of the wealth created by industry and with the government or control of the industry. The first covers such questions as hiring, selection, placement, training, promotion, treatment by foremen, health, safety, fatigue, recreation, lunches, and rest periods. The second is concerned with bargaining, wages, hours, unionism, and shop discipline.

1. *Personal relations in industry.*—The personal problem of administering the labor forces in industry on the principle that wage earners are human beings and not some abstract thing called labor, ought not to be a matter of industrial controversy. The personal treatment that working people receive at the hands of their employers, their handling by superintendents, foremen, and straw bosses is not properly a controversial subject. Each individual worker has certain qualities, characteristics, and capacities, and the management must understand these as well as it understands the materials and the mechanical power that it uses. The failure to develop and train these capacities is one of the great sources of waste in industry. The employer must not expect a worker to give results or stand strains beyond his capacity any more than he expects an engine or a bridge to do it.

2. *Personal relations a technical problem.*—Safety and sanitation in industry are technical problems for experts to decide, rather than problems for employers and employees to fight about. What constitutes a safe and a healthful place of employment is a subject for the safety engineer and the medical man to decide. In the same way, the

proper handling of human beings is a technical problem that requires careful study and also sympathetic understanding. Just because a man knows how to make a certain part of a shoe or a shirt or a machine is no reason for making him a foreman or a superintendent, thereby giving him authority over the lives and welfare of other employees. We expect a stationary engineer to know something about a boiler or an engine before he is licensed to operate one. Just so, before any one is permitted to handle human beings in a plant, to make rules and regulations for them and to require performance from them, he must be required to show some expertness in understanding human beings. The work of dealing with these personnel problems in industry that are not essentially controversial belongs to a personnel or labor manager who should have the same capacity and authority in handling the labor of the plant that the sales-manager, the financial director, and the production manager have in handling the problems with which they are concerned.

3. *Industrial relations essentially controversial.*—The return that workers should get for their labor, the number of hours they shall work, the share they shall have in fixing the terms of employment, and whether they shall do their bargaining collectively, through their own chosen representatives or organizations—these comprise the modern industrial or business relations between employer and employee; and they represent controversial issues that can not be solved by any technical expert. They require settlement by negotiation and bargaining, and they will be settled from time to time in accordance with the relative strength and bargaining power of the parties to the controversy.

II. Planning a Labor Relations Policy.

1. *Labor policy a matter for chief executives.*—It is the chief executives of the company who must determine the labor policy of a plant. In the past it has been customary for the chief executives to deal only with the production, finance, and sales problems. Labor was left as an incidental matter for production superintendents and foremen to handle. Only when labor difficulties arose was labor considered important enough for the directors to handle and at such times subordinate officers had already committed the company to a policy that the directors were bound to uphold. Only by determining the labor policies in the board of directors' meetings, where they can be considered in conjunction with production, finance, and sales policies, can a proper system of labor relations be devised and kept in constant operation.

2. *Labor records and reports.*—If the chief executives of the company are to deal with labor, one of the first needs is to set up data-collecting machinery that will present to the management from day to day exact conditions. In other words, the management must keep a continuous labor inventory. But not only must the labor record system show the condition of labor in the aggregate, it must show the career of the individual worker in the plant. Too often the keeping of individual records confines itself to watching what the company is getting out of the man. Equally important is the record of what the man is getting out of the company. If the same importance is attached to keeping a record of the company's performance of its duties to the worker as to recording the man's performance for the company, there will be little opposition to a careful record system. In all cases care must be taken not to make the records over-elaborate, and the management must watch itself constantly to prevent the keeping of records from becoming an end in itself. Every record is superfluous that is not used in administering the labor policies of the plant.

3. *What to avoid.*—Many so-called consulting experts on employment management and industrial relations, failing to catch the distinction between the purely personal and the industrial problems arising in the relations between employer and employee, often mislead business men into thinking that if they will establish a centralized employment department, install certain methods of record keeping, and adopt a certain procedure in selecting and dismissing employees, all their labor problems will be solved. Other "experts" there are who have some one system of shop organization or efficiency records or method of analyzing and classifying human character which they try to sell to employers as a solution for all labor difficulties. The employer himself, dismayed by a large labor turnover, seeing distrust and unrest among his employees, and fearing strikes and "Bolshevism," is inclined to seek relief in some patent device. He seizes upon profit sharing or shop committees or some plan of representation of employees as a panacea for all his ills. Patent medicines do not cure bodily ills caused by bad living, and there is no single medicine that will cure industrial ills brought on by bad management of the human forces in industry.

4. *Choosing a labor policy.*—Having determined what to avoid, the employer must make up his mind as to the exact nature of the improvement in labor relations that is needed in his plant and how far he is willing to go in making improvements. It is quite common for the owner of a business to say that he wishes his employees to have the best conditions, the best treatment, and an absolutely square deal. But this is a general wish, and the employer must decide spe-

cifically what he is willing to do to insure these things. The employees may feel that they never can have a square deal until they have an equal share in controlling discipline in the shop. Is the employer ready to turn over this shop control to the employees? Is he ready to deal collectively with his employees, or does he merely want to insure them an individual square deal in accordance with his own ideas of justice? If he is willing to deal collectively with his employees he must decide whether he will recognize a union or deal with representatives from among the employees; and if only with his own employees, then are they to have advisory powers only, or an equal voice with the management in determining all questions? These things must be decided in advance. An undecided or vacillating policy makes the employees feel that the employer is not honest with them. They feel what the employer's labor policy really is in their daily experiences in the shops and it is important for the employer to see that this experience is in accord with his announced labor policy.

5. *Making the policy public.*—Quite as important as deciding the policy itself is to make sure that the employees have the same understanding of the policy of the management in relation to labor as the employer himself has. Often a firm will announce an employment system, or a profit sharing or shop committee plan, with a statement that it wishes to establish democratic relations with its employees and give them a voice in determining conditions of employment. To the employees this means collective bargaining or a veto power on any policy of the management that they may not like. But the employer may not intend it that way, and the plan itself often shows that he wishes to maintain control, and merely desires to provide means of consulting with his employees and providing for their welfare. This leads to misunderstanding and causes the very friction that the plans are intended to remove.

6. *Providing machinery for carrying out labor policies.*—It is important that the management shall make no promises to the employees which it has not the machinery for making good. It is most common for employers to promise promotion to deserving employees, yet there are very few plants which have any organized plan for finding out what employees deserve promotion, and of making that promotion when it is deserved. The usual procedure is to wait until the employee asks for a raise or a better job. It is quite natural, therefore, for the employees to think that the employer tries to deceive them with false promises. They resent having to beg for the increases and the better jobs that they feel the management ought to take the initiative in giving them; and they know that the men who are good at asking for raises usually get farther ahead, although

they may not be the most deserving. If any promises are made they must be considered as in the nature of contracts. The means of keeping the promises must be created. If no machinery is in existence for fulfillment, then care must be taken to make no promises so as to raise no false hopes.

7. *Determining administrative organization.*—If the employer has a small plant, and is in daily touch with all his employees, he need have little difficulty in making his labor policies work out in practice as he intends them. But as a matter of fact he is usually in an executive office far removed from the foremen and straw bosses, who have the direct handling of labor in charge. These quite commonly pursue policies of their own that may not at all be in accord with the employer's intention. To translate the owner's wishes into actual performance, therefore, it is necessary to create an administrative organization for carrying out the labor policies of the plant, to give authority, fix responsibility, provide for appeals, and maintain constant supervision that will keep the machinery operating properly.

III. Creating the Labor Administration Organization.

1. *The employment organization.*—Creating the machinery of labor administration in a plant becomes a simple matter when the nature of labor relations is properly analyzed and a definite policy of labor management is decided upon by the chief executives of the company with due consideration of the analysis. Basic in any plan of properly handling labor is a centralized organization for handling all the employment functions. The man put in charge of this work is commonly known as the employment manager. While it is important that he should know the occupations and the nature of the work the men he selects are to do, it is more important that he should know thoroughly the kind of human beings that apply to the plant for work and the kind of work they can do.

2. *The service organization.*—In addition to handling employment problems the management must provide for the human needs that develop from the mere congregation of a large number of human beings under one roof. There are the problems of health, of sanitation, and of medical care, of safety and compensation, of education of the foreigner, the illiterate, and the juvenile employees, of providing eating, rest, and recreation facilities, and of insurance, pensions, and other welfare activities.

3. *Employment and service organization not industrial democracy.*—The employment and service organizations deal with the personnel problems, and are intended to provide efficient and humane handling of the labor force of a plant. To many this will seem sufficient; but it should be clearly understood that this does not touch the

industrial relations problem nor does it provide for democratic control of working conditions and terms of employment. Realizing this, some employers try to provide democracy by creating shop committees to advise and to consult with the management about the various employment and service problems. But this does not insure democracy unless the employees vote on the rules and regulations by which they are governed, and have the right of a trial by their peers when disciplined for infringement of any rule. If the employer really means to have democratic management of his labor force, then he must provide for collective bargaining with his employees and give them a voice in controlling discipline.

4. *The industrial relations organization.*—Democracy or partnership in labor management requires an industrial relations organization designed to place the employees and the employer on an equality in bargaining power and to give them an equal voice in determining working conditions and terms of employment. Such an organization consists of employees' representatives, sometimes known as shop stewards or shop chairmen, employees' committees dealing with wages, hours, grievances, and discharges, and an arbitration board of some kind to decide differences between the management and the employees. If the employer is not prepared to give his employees an equal voice in labor bargaining and shop government, he should avoid creating any committees or boards which give the appearance of collective bargaining but not the essence. Employees are quick to sense the difference in their daily experiences in the shop, and they think the employer is trying to deceive them.

5. *A model labor administration organization.*—The most advanced form of labor administration obtains in a few firms which have a vice president in charge of labor, or a labor manager equal in rank and authority with the production, sales, and financial managers. A large clothing concern, for example, divides its operations into five departments—purchasing, production, labor, sales, and finance. At the head of each is a manager and the five together constitute the executive organization of the business. No important policy is decided upon by any one department without its effects on the others being considered. If any policy is proposed in purchasing, production, or advertising, which may bring overwork for a period and then lay-offs, the labor manager is present to point out the effect on the workers in the plant and thus have the policy changed to prevent disorganization of the labor force. So it is with every other policy affecting labor. In such a plan as this the personnel organization and the industrial relations machinery are directed by the one labor manager. The handling of the personnel problems and the industrial relations are, however, organized separately.

6. The exact nature of the authority and responsibility placed upon the various agencies dealing with labor in a plant must depend upon the size of the plant, the kind of business, the traditions of the management, and the character of the workers employed. No one form of organization will apply to all businesses.

IV. Operating the Labor Administration Machinery.

1. *The employment office.*—If the management of a business is to perform its employment function properly, it must provide a suitable employment office. Intelligent hiring, proper selection and business-like adjustment of difficulties can not be achieved if this work is done in a noisy and busy factory, in a hallway, or outside the plant at the gate or in an alley. An office big enough to provide a waiting room with seats for all applicants for employment and private interviews for each applicant is essential. This office must be so located as to be easily accessible not only to applicants from outside the plant, but also to employees from within the plant and to the company's accounting department. A poor place to hire means a poor place to work to the applicant. To attract good workers to a plant, the employment office must be made inviting, dignified, and pleasant.

2. *Recruiting labor.*—Next after this must come an intelligent study of the sources of supply of the kind of labor employed in the plant. Promiscuous advertising for labor in newspapers is as wasteful and inefficient as such advertising would be by a purchasing agent who wanted to buy materials or machinery for the plant. The purchasing department goes to definite markets for the things it needs. The employment department must pursue a similar policy. Recommendations from workers within the plant constitute one of the best sources of labor supply. A prospect file of selected names from those who have applied for work at the plant and those who have quit with good records is another excellent way to get new help.

3. *Canvassing the labor needs.*—Systematically ascertaining the labor needs of the plant from time to time is as important as systematic recruiting. This can be accomplished by requiring each foreman or head of a department to send a written requisition for help to the employment department in the same way that requisitions for materials are sent to the storeroom. The foreman is required to give a detailed description of the exact kind of work, the qualities and characteristics of the workers needed to fill the job, and to indicate additional help required, whether it is to replace a person who has left or whether it is to increase the size of the force. To facilitate the requisitioning of labor, a good many plants have carefully analyzed each job and made standard descriptions of them so they could be referred to by a number or a sign.

4. *Selection of labor.*—From the requisition the person in the employment department who is to select the labor should get his exact knowledge of the requirements, physical, mental, and moral, and the degree of trade knowledge and skill needed for the place, and the age, sex, and nationality that experience has proved to be the most fitted for the work. But more important even than knowing the exact nature of the job is a knowledge by the employment man of the nature of human beings, and the kind of work that they can do and have done. Each applicant must be given a private interview, for in no other way is it possible to find out exactly the kind of work that he is fitted for and to prevent him from being assigned to duties which are beyond his abilities or his strength. In the selection interview, care must be taken not to make any promises to the applicant which the company is not in a position to fulfill. Any unwarranted promises will develop ill feeling among the employees against the company.

5. *Induction and training.*—No matter how unskilled a job is, there are wrong and right ways to do the job. New employees must be taught the right way. Mere delivery of the man to his foreman is not enough. First the new employee must be introduced to his fellow workers, and the shop rules, practices, and conveniences must be carefully pointed out and explained to him. Someone must see to it that he is properly broken in and trained for his work. The foreman may be a good production man but a very poor teacher. Most of the labor turnover in a plant is caused by employees leaving who have been employed less than a month. This shows that once they get over the strangeness of the new surroundings and the new work they become steady employees. Only careful induction and training of new employees will serve to overcome labor turnover loss from this cause.

6. *Promotion and transfer.*—No desirable employee is willing to work at an employment that offers no opportunity for advancement or promotion. Advancement may sometimes take the form of increase in wages, but more often it means promotion to a better job. Organized machinery for seeing that employees are promoted when they deserve it is a prime essential in any industrial relations organization. This can not be provided by leaving the matter entirely in the hands of the foreman, because foremen do not want to lose good men from their departments, and they are not informed as to the best opportunities in other departments. An overhead organization like the employment department must be vested with the responsibility for following the careers of the individual workers and searching out the opportunities in the various departments of the plant for promoting the best employees. Besides promotion, transfers from one department to another are often necessary to readjust misplacement of employees and to take care of fluctuations in the amount of work in

the various departments. This, too, must be handled by an overhead organization like the employment department; otherwise one foreman will be discharging employees while other foremen will be hiring new help. In the matters of both promotions and transfers the foreman's responsibility must be limited to recommendations as to the character of the man's work and to seeing that his employment in the particular department is properly begun and terminated. The responsibility for initiating and arranging promotions and transfers must rest on the employment department, which deals with all the departments in the plant.

7. *Complaints and grievances.*—The employer may consider the mistakes in a worker's pay, slighting remarks by foremen, or complaints of favoritism or unjust treatment as mere incidents and not very important. He lets the complaint go with "Take it up with your foreman," who may be the very cause of the difficulty. In the minds of the employees, however, these little troubles look very large, and unless means are provided for making complaints and hearing grievances, a feeling of resentment grows up among the workers in the plant that the management can not understand. To prevent any employee from suffering from a sense of injustice, the general manager either must set aside regular hours when he will be ready to talk over with his employees any of their problems or else he must delegate this duty to the employment or labor manager. Someone in the organization above the foreman must be made responsible for seeing that a square deal is assured to every employee, and not only that, but also for making the employee really feel that he is getting a square deal.

8. *Interviews on leaving employment.*—Whether an employee is dismissed or quits of his own accord, he should be interviewed by the labor manager before he is finally paid off, to get at the real reason for leaving or discharge. Only by such a system of separation interviews can the employer be sure that the employees are wisely or justly discharged, and there is no better way to find out causes of dissatisfaction among employees and to get suggestions for making improvements. It is just as good business policy to have employees who leave the firm go away thinking well of the company as it is to see that customers remain kindly disposed toward the company.

9. *Service or "welfare" work.*—In proportion as the employment organization is efficiently operated and the hiring, training, promotion, and management of employees are properly handled, there will be less need for so-called "welfare" work to keep employees contented. Personal service work will, however, always be needed. The safety and accident prevention movement is sufficiently developed to require little more than mention here. Sanitary conditions

in the factory and protection of the health of employees by industrial physicians and nurses are also plain business measures for decreasing sickness, absences, and spoiled work and for increasing production. Of the other welfare activities, such as entertainments, athletics, schools, vacation camps, insurance and pensions, profit sharing, etc., those only will be needed which actually aid in building up spirit and morale that result in increased production.

10. *Shop government.*—Employers who deal with trade-unions or who wish voluntarily to give their employees a voice in determining wages, hours, working conditions, and shop government, have, in addition to the above, to operate the machinery for handling the economic or collective labor relations. Where an agreement is made with a union the methods of collective bargaining will be contained in the agreement. Where the employer wishes to inaugurate collective bargaining he will begin by creating shop committees or an employee representation plan of some kind. Experience has shown that the best method of handling this is for the management not to devise some plan of its own to be submitted to the employees, but rather to ask the employees to elect representatives who, together with the management, will work out a plan approved by both. In this way the employees will not be as likely to criticize minor defects in the plan, for they will feel it is of their own making.

WOMEN IN INDUSTRY.

Output of Woman Workers in Relation to Hours of Work in Shell Making.

IN DECEMBER, 1917, the English Department of Scientific and Industrial Research and the Medical Research Committee joined in appointing a research board to investigate the subject of industrial fatigue on comprehensive and systematic lines. Its purposes are thus set forth:

To consider and investigate the relations of the hours of labor and of other conditions of employment, including methods of work, to the production of fatigue, having regard both to industrial efficiency and to the preservation of health among the workers.

This board has recently published a report¹ upon the comparative output under long and short hours of women employed as shell makers. Investigations were confined to those employed in what is known as the "ripping" or "part off" operation in shell turning. This is the first operation to which the rough forging is subjected, and involves cutting off the extra portion and reducing the forging to its proper length. The forging must be placed in position in the lathe by the operator, and as soon as the cutting is done, must be removed and another put in, and so on. "The operation is generally considered to be the hardest in shell making, for the shell is at its heaviest stage, and further, the operation is a rapid one and entails constant changing of shells."

The investigation was carried on in a national factory, in which women had been employed on this operation for about 18 months, working in 12-hour shifts. It was then decided that these hours were affecting women adversely, and a system of three shifts was introduced, under which they worked from 7 to 8 hours, according to whether they were on morning, afternoon, or night shifts. Data as to actual hourly output had been taken for all women working on this operation some time before the change in hours was made. After it was made some months were allowed to lapse that the workers might fall into their settled pace under the new hours, and

¹ Medical Research Committee and Department of Scientific and Industrial Research. Reports of the Industrial Fatigue Research Board. No. 2: *The Output of women workers in relation to hours of work in shell making.* London, 1919. 23 pp.

then output data, corresponding to that taken under the earlier hours, were collected. The results were as follows:

COMPARATIVE HOURLY OUTPUT UNDER SHIFTS OF DIFFERENT LENGTHS.

Shift.	Number of shells produced per worker—		
	Per hour spent in factory.	Per hour of possible work.	Per hour of actual work.
Long shift.....	6.98	7.90	8.17
Short shift.....	8.04	8.65	8.70

The time spent in cutting each shell, work in which the operator's swiftness and skill played no part, was 5 minutes 2 seconds. Under the long shift, therefore, only 18.88 minutes and under the short shift 16.21 minutes per hour were spent in work in which the operator could vary her speed; that is, when the women were working 12 hours, they spent on an average 2.31 minutes in handling each shell, but when they were working from 7 to 8 hours, they took on the average only 1.86 minutes for handling each shell.

Hence the work (under the control of the women as far as speed was concerned) accomplished in 100 minutes of the long-hour system was carried out in 80.5 minutes of the short-hour system, a decrease of 19.5 per cent in time.

The difference under the two systems in output per hour in the factory and per possible hour of work points, in the opinion of the board, to economies of the shorter shift not directly dependent on the greater speed of the worker. Under the 12-hour shift, it was necessary to allow at least two breaks for mealtimes, amounting to an hour and a half; under the short shift half an hour for a lunch was all that was necessary. The difference in output per hour of possible work is regarded as due in part, at least, to a difference in the actual efficiency of the running of the machinery.

It may indicate that when short hours are being worked, those in charge have to keep the running plant in a higher state of efficiency than when running on longer hours, in order that the operators working on piece rates may be more satisfied with their output and hence with their wages.

A study of hourly output throughout the working day showed in every case under the long shift a marked falling off in the last hour, while in the short shifts no such uniform result was observed; on the contrary, "several sets of curves exhibit no falling off." This study was not pushed very far, but its general results are summed up as follows:

The curves of output for the short shifts give evidence of the possibility of running at full output right to the end of the shift, but the curves for the long shifts give no such evidence.

A comparison of the same worker's output records for the long and short shifts shows inferiority in hourly output during the later hours of the long shifts.

No evidence of detrimental effect of night work in comparison with day work is traceable.

Postwar Position of Women in the English Civil Service.

TWO reports on this subject have been issued by committees appointed to consider what should be done with regard to the women in the civil service. During the war they were taken on in large numbers, and of necessity were used for all kinds of work, filling many positions formerly reserved for men. Early in the year a report was issued by the Women's Advisory Committee of the Ministry of Reconstruction,¹ and a few months later the subject was dealt with in the final report of the Treasury committee on recruitment after war.²

The Women's Advisory Committee recommends placing men and women on an equal footing of opportunity.

We are of opinion that the interests of the State are best promoted by widening the field of selection and by securing the highest available capacity, irrespective of sex. We therefore recommend that women should be eligible for admission to all grades of appointment in the civil service on the same terms and subject to the same conditions as men. In recommending the employment of women on the same conditions as men, we intend to imply that they should have equal opportunities of promotion and an equal scale of pay.

The committee considers the two reasons usually assigned for paying women less than men, but finds them inapplicable to the situation in the civil service. The first reason by which a lower scale of pay for women is usually justified is that women are less efficient than men. As to this, the committee points out "that with an equal scale of pay, and a proper system of selection and promotion, relative inefficiency would result merely in the appointment of a smaller number of women, and the promotion of a smaller proportion to posts of responsibility." This result, the committee considers, would be decidedly better than hampering the service by the appointment of inferior workers under a specious appearance of economizing on salaries. The second reason usually assigned is that men have family responsibilities, while women have not. The committee does not care to go into the relative responsibilities of men

¹ Ministry of Reconstruction. Women's Advisory Committee. Report of the subcommittee appointed to consider the position after the war of women holding temporary appointments in Government Departments. London, 1919. 8 pp. Cmd. 199.

² Civil Service. Recruitment after War. Final report of the committee appointed by the Lords Commissioners of His Majesty's Treasury to consider and make recommendations upon certain questions with regard to recruitment for the civil service after the War. London, 1919. 15 pp. Cmd. 164.

and women, but considers that if the assumption were wholly true the matter is not adequately dealt with "by the rough and ready method of paying less to women than to men, irrespective of their individual circumstances," that the object to be kept in view is the securing of the best available civil servants, and that this ought not to be confused with questions of the family responsibilities of the candidates.

The committee recommends a change in the method of admitting stenographers and typists, advising that the standard of age and of education for admission should be raised, and that, after admission, they should be given greater responsibility and some chance of advancement. It also strongly urges the provision of training for the many women who will have to be dropped from the civil service when the work of the special war departments is ended. This training the Government should provide without cost to the women, not as a measure of charity, but as a means of increasing the supply of trained and specially qualified workers, whose services are certain to be urgently needed during the period of reconstruction, and probably for many years thereafter.

The report of the Treasury committee is much less favorable to women. This committee contemplates the immediate laying off of the women who have served during the war, their places to be filled, so far as they are not of a purely temporary nature, by ex-service men, but the report contains no recommendation for training or other provision for those thus dropped. The committee divides the regular civil service positions into two grades, the second grade being to a considerable extent a feeder for the first, which, in turn, is to supply the candidates for administrative and other advanced posts. The first grade is for some time to come to be reserved for ex-service men, so that women are automatically excluded. The committee thinks, however, that it will be well to extend the field of women's services in minor routine or purely clerical work, but deprecates the idea of equal pay for men and women. Instead, the committee advises the segregation of women, with a separate scale of pay and promotions.

As to women in the higher posts, the committee makes one clear and definite recommendation, saying that the experiment should be tried of employing women "in administrative posts of the class 1 type, where the work is especially appropriate to women." As to other administrative posts, the committee points out that the supply of ex-service men is sufficient to absorb them for some years to come, and as to the candidacy of women thereafter, the report says:

Even when the supply of ex-service men has been exhausted and recruitment for class 1 under normal conditions can be resumed, it will not be practicable to admit women generally to junior administrative posts throughout the service as interchange-

able with men until experience has demonstrated not only that they can fill these posts satisfactorily, but that in the same proportion as men they will be competent to carry out the higher administrative duties for which junior administrative work constitutes the regular and necessary training.

Apparently the effect of this highly involved recommendation is to exclude women from administrative posts altogether. As one critic of the report puts it: "That is to say, that not only are women not to try to carry out the higher kinds of work until they have proved (without trying) that they can do them; but that women may not hold the higher posts until they have been trained for them in the junior posts, and may not hold the junior posts until they have proved their success in the higher ones."

The report was felt by the women concerned to be so unfair to them that a large meeting of protest was organized by the Association of Women Clerks and Secretaries, supported by a large number of other labor organizations, at which resolutions were passed asking that no action should be based on the Treasury report, but that wholly different principles should be adopted.

It was unanimously resolved to ask the Government to adopt the Adkin Committee's recommendation that separate grade and examinations for women in the civil service should be abolished; to adopt the principle of equal pay for equal work; and to give women and men equal opportunities for advancement.¹

No information is at hand as to the response of the Government.

¹ Daily Herald (London), June 17, 1919.

INDUSTRIAL ACCIDENTS.

War-Time Trend of Employment and Accidents in a Group of Steel Mills.

By LUCIAN W. CHANEY.

THE data on which this paper is based were taken from the records of a group of steel mills and cover the years 1914 to 1918 and four months of 1919. The information, therefore, is useful as indicating the effect of the war conditions on industrial activity, and also upon accident rates. It is particularly interesting for two reasons: (1) As the record is given for each month it is possible to show the fluctuations in rates of employment and of accidents not only by individual months but also by years ending with each month. The latter method tends to "smooth out" the rate curves and indicates more clearly the trend of employment and of accident experience than would the more sharply fluctuating rates based on monthly figures alone. (2) The record is in such form that both severity and frequency can be determined. This is especially interesting because it has not heretofore been possible to follow both rates for a period of years in such detail as is here done.

The data which underlie the discussion are presented in four tables. These are followed by a chart showing the trend of employment or "exposure," nondisabling accident frequency, disabling accident frequency, and accident severity for the years ending with each month from December, 1914, to April, 1919. Table 1 shows the number of 300-day workers, nondisabling accidents, disabling accidents, and time allowances for each month of the period covered.

TABLE 1.—NUMBER OF 300-DAY WORKERS (EXPOSURES), NONDISABLING ACCIDENTS, DISABLING ACCIDENTS AND TIME ALLOWANCES IN A LARGE GROUP OF STEEL MILLS, BY MONTHS, JANUARY, 1914, TO APRIL, 1919.

Month.	300-day workers (exposures).					
	1914	1915	1916	1917	1918	1919
January.....	2,982	2,943	3,687	4,170	3,988	5,167
February.....	3,173	3,107	3,812	4,144	4,020	4,570
March.....	3,149	2,976	3,898	4,237	4,117	4,818
April.....	3,113	3,041	3,879	4,182	4,129	4,506
May.....	2,996	3,176	3,998	4,322	4,211	.....
June.....	2,989	3,328	4,041	4,328	4,163	.....
July.....	3,092	3,569	4,017	4,155	4,834	.....
August.....	2,999	3,680	3,984	4,313	4,921	.....
September.....	2,900	3,704	4,084	4,279	4,744	.....
October.....	2,847	3,745	4,161	4,465	4,838	.....
November.....	2,659	3,819	4,122	4,444	4,520	.....
December.....	2,602	3,839	4,142	4,319	4,905	.....
Total.....	35,501	40,927	47,825	51,358	53,390	.....

TABLE 1.—NUMBER OF 30-DAY WORKERS (EXPOSURES), NONDISABLING ACCIDENTS, DISABLING ACCIDENTS, AND TIME ALLOWANCES IN A LARGE GROUP OF STEEL MILLS, BY MONTHS, JANUARY, 1914, TO APRIL, 1919—Concluded.

	<i>Nondisabling accidents.</i>					
	1914	1915	1916	1917	1918	1919
January.....	1,820	1,444	3,243	3,828	2,265	2,714
February.....	1,804	1,656	3,061	3,292	2,240	2,347
March.....	2,165	2,253	3,513	3,224	2,868	2,635
April.....	2,132	2,564	3,823	3,418	2,764	2,401
May.....	2,146	2,944	4,850	3,931	3,482	.....
June.....	2,418	3,260	4,624	4,310	3,504	.....
July.....	2,481	3,739	4,863	3,950	3,447	.....
August.....	2,363	3,973	4,991	4,025	3,969	.....
September.....	2,041	3,973	4,618	3,260	3,145	.....
October.....	1,703	3,563	4,254	3,271	3,059	.....
November.....	1,313	3,219	3,893	2,969	2,394	.....
December.....	1,306	3,219	3,536	2,392	2,550	.....
Total.....	23,692	35,807	49,269	41,870	35,687	.....
	<i>Disabling accidents.</i>					
	1914	1915	1916	1917	1918	1919
January.....	528	286	735	798	547	587
February.....	550	310	709	683	456	501
March.....	579	354	786	716	551	550
April.....	509	402	723	664	525	514
May.....	493	508	678	670	550	.....
June.....	475	592	812	660	512	.....
July.....	516	671	984	680	587	.....
August.....	460	679	1,012	718	614	.....
September.....	386	690	854	597	508	.....
October.....	298	718	833	664	472	.....
November.....	235	657	780	621	429	.....
December.....	293	662	694	461	464	.....
Total.....	5,322	6,529	9,600	7,932	6,215	.....
	<i>Time allowances (days lost).</i>					
	1914	1915	1916	1917	1918	1919
January.....	66,670	12,315	43,566	66,065	53,638	53,750
February.....	32,078	33,897	53,177	40,156	67,885	48,384
March.....	43,175	23,206	52,313	39,274	69,005	31,226
April.....	54,731	25,377	45,395	39,635	50,177	36,896
May.....	24,663	5,893	29,863	26,964	48,855	.....
June.....	17,877	42,622	45,345	45,984	48,747	.....
July.....	18,530	13,524	33,025	68,488	45,424	.....
August.....	31,583	45,925	77,628	29,003	78,724	.....
September.....	32,439	44,314	28,471	45,177	48,884	.....
October.....	34,384	34,250	30,282	34,810	27,061	.....
November.....	23,616	51,418	81,455	59,215	67,360	.....
December.....	22,807	41,597	55,897	18,895	58,571	.....
Total.....	402,553	374,338	576,417	513,666	664,331	.....

Table 2 presents the accident rates, both frequency and severity, from month to month. This table is not made the subject of extended comment but is introduced because it illustrates the fact that even in a large group, like the one under consideration, the small intervals, such as months, show very considerable fluctuations.

TABLE 2.—ACCIDENT RATES IN A LARGE GROUP OF STEEL MILLS, BY MONTHS, JANUARY, 1914, TO APRIL, 1919.

Month.	Frequency rates, nondisabling accidents (per 1,000 300-day workers).					
	1914	1915	1916	1917	1918	1919
January.....	610	491	880	918	568	525
February.....	569	533	803	794	557	514
March.....	688	757	901	761	697	547
April.....	685	843	986	817	669	533
May.....	716	927	1,213	910	827	.....
June.....	809	980	1,144	996	842	.....
July.....	802	1,048	1,211	951	713	.....
August.....	788	1,080	1,253	933	807	.....
September.....	703	1,073	1,131	762	663	.....
October.....	598	951	1,022	733	632	.....
November.....	494	843	944	668	530	.....
December.....	502	838	854	554	520	.....
Total.....	667	875	1,030	815	668	.....
Month.	Frequency rates, disabling accidents (per 1,000 300-day workers).					
	1914	1915	1916	1917	1918	1919
January.....	177.1	97.2	199.3	191.4	137.2	113.6
February.....	173.3	99.8	186.0	164.8	113.4	109.6
March.....	183.9	119.0	201.6	169.0	133.8	114.2
April.....	163.5	132.2	186.4	158.8	124.5	114.1
May.....	164.6	159.9	169.6	155.0	130.6	.....
June.....	158.9	177.9	200.9	152.5	123.0	.....
July.....	166.9	188.0	245.0	163.7	121.4	.....
August.....	153.4	184.5	254.0	166.5	124.8	.....
September.....	133.1	186.3	209.1	139.5	107.1	.....
October.....	104.7	191.7	200.2	148.7	97.6	.....
November.....	88.3	172.0	189.2	169.7	94.9	.....
December.....	112.6	173.3	167.5	106.7	94.6	.....
Total.....	149.9	159.5	200.7	154.4	116.4	.....
Month.	Severity rates, disabling accidents (days lost per 300-day worker).					
	1914	1915	1916	1917	1918	1919
January.....	22.4	4.2	11.8	15.8	13.4	10.4
February.....	10.1	10.9	13.9	9.7	16.9	10.6
March.....	13.7	7.8	13.4	9.3	16.8	6.5
April.....	17.6	8.3	11.7	9.5	12.2	8.2
May.....	8.2	1.9	7.5	6.2	11.6	.....
June.....	6.0	12.8	11.2	10.6	11.7	.....
July.....	6.0	3.7	8.2	16.5	9.4	.....
August.....	10.5	12.5	19.5	6.7	16.0	.....
September.....	11.2	12.0	7.1	10.6	10.3	.....
October.....	12.1	9.1	7.4	7.8	5.6	.....
November.....	8.9	13.5	19.8	13.3	14.9	.....
December.....	8.8	10.8	13.5	4.4	11.9	.....
Total.....	11.3	9.1	12.1	10.0	12.4	.....

Table 3 gives the total number of 300-day workers (exposures), the total number of nondisabling and of disabling accidents, and the total time allowances (days lost) for the years ending with each of the months from December, 1914, to April, 1919.

TABLE 3.—NUMBER OF 300-DAY WORKERS (EXPOSURES), NONDISABLING ACCIDENTS, DISABLING ACCIDENTS, AND TIME ALLOWANCES FOR YEARS ENDING WITH EACH MONTH, DECEMBER, 1914, TO APRIL, 1919.

Year ending with—	300-day workers (exposures).					
	1914	1915	1916	1917	1918	1919
January.....		35,462	41,671	48,308	51,176	54,569
February.....		35,396	42,376	48,640	51,052	55,119
March.....		35,223	43,298	48,979	50,932	55,820
April.....		35,151	44,136	49,282	50,879	56,197
May.....		35,331	44,958	49,606	50,868	.....
June.....		35,670	45,671	49,893	50,803	.....
July.....		36,147	46,119	50,031	51,482	.....
August.....		36,828	46,423	50,360	52,090	.....
September.....		37,632	46,803	50,555	52,555	.....
October.....		38,530	47,219	50,859	52,928	.....
November.....		39,690	47,522	51,181	53,094	.....
December.....	35,501	40,927	47,825	51,358	53,390	.....
Nondisabling accidents.						
January.....		23,316	27,596	49,854	40,307	36,136
February.....		23,168	30,001	50,005	39,255	36,243
March.....		23,256	40,261	49,796	38,899	36,010
April.....		23,688	41,520	49,391	38,245	35,647
May.....		24,466	43,426	48,472	37,796	.....
June.....		25,328	44,790	48,158	46,990	.....
July.....		26,586	45,914	47,245	36,487	.....
August.....		28,196	46,932	46,279	36,431	.....
September.....		30,128	47,577	44,921	36,316	.....
October.....		31,988	48,268	43,938	36,104	.....
November.....		33,894	48,942	43,014	35,529	.....
December.....	23,692	35,807	49,269	41,870	35,687	.....
Disabling accidents.						
January.....		5,080	6,978	9,673	7,681	6,255
February.....		4,840	7,377	9,647	7,454	6,300
March.....		4,615	7,809	9,577	7,289	6,299
April.....		4,508	8,130	9,518	7,150	6,280
May.....		4,523	8,300	9,510	7,030	.....
June.....		4,640	8,520	9,358	6,882	.....
July.....		4,795	8,833	9,054	6,789	.....
August.....		5,014	9,166	8,760	6,685	.....
September.....		5,318	9,330	8,503	6,596	.....
October.....		5,738	9,455	8,334	6,404	.....
November.....		6,160	9,578	8,175	6,212	.....
December.....	5,322	6,529	9,600	7,932	6,215	.....
Time allowances (days lost).						
January.....		348,198	405,598	598,916	501,239	664,443
February.....		350,017	424,869	585,895	528,968	644,942
March.....		330,048	453,976	572,856	558,699	607,163
April.....		300,694	473,994	567,096	569,241	593,882
May.....		281,924	497,964	564,197	591,132	.....
June.....		306,669	500,687	564,836	593,895	.....
July.....		301,663	520,188	600,299	570,831	.....
August.....		316,005	551,891	551,674	620,552	.....
September.....		327,880	536,048	568,380	624,259	.....
October.....		327,746	532,080	572,908	613,510	.....
November.....		355,548	562,117	550,668	621,655	.....
December.....	402,553	374,338	576,417	513,666	664,331	.....

Table 4 shows the rates resulting from dividing the employment or exposure figures of Table 3 into the corresponding accident figures.

TABLE 4.—ACCIDENT RATES IN A LARGE GROUP OF STEEL MILLS, FOR THE YEARS ENDING WITH EACH MONTH, DECEMBER, 1914, TO APRIL, 1919.

Year ending with—	<i>Frequency rates, nondisabling accidents (per 1,000 300-day workers).</i>					
	1914	1915	1916	1917	1918	1919
January.....		657	898	1,032	788	662
February.....		655	920	1,030	769	658
March.....		660	930	1,017	764	645
April.....		674	941	1,002	752	634
May.....		693	966	977	743	
June.....		710	981	965	728	
July.....		735	995	944	709	
August.....		766	1,011	919	699	
September.....		801	1,016	889	691	
October.....		830	1,022	864	682	
November.....		854	1,030	840	670	
December.....	667	875	1,030	813	668	
<i>Frequency rates, disabling accidents (per 1,000 300-day workers).</i>						
January.....		143.3	167.4	200.2	150.1	114.6
February.....		136.7	174.1	198.3	145.9	114.1
March.....		131.0	180.4	195.5	143.1	112.9
April.....		128.2	184.2	191.1	140.5	111.8
May.....		128.0	184.6	191.7	138.2	
June.....		130.1	186.5	187.6	135.5	
July.....		132.7	191.5	181.0	131.9	
August.....		136.1	197.4	173.9	128.3	
September.....		141.3	199.3	168.2	125.5	
October.....		148.9	200.2	163.9	121.0	
November.....		155.2	201.5	159.7	117.2	
December.....	149.9	159.5	200.7	154.4	116.4	
<i>Severity rates, disabling accidents (days lost per 300-day worker).</i>						
January.....		9.8	9.7	12.4	9.8	12.2
February.....		9.9	10.0	12.1	10.4	11.7
March.....		9.4	10.5	11.7	11.0	10.9
April.....		8.6	10.7	11.5	11.2	10.6
May.....		8.0	11.1	11.4	11.6	
June.....		8.6	11.0	11.3	11.7	
July.....		8.3	11.3	11.9	11.1	
August.....		8.6	11.9	11.0	11.9	
September.....		8.7	11.4	11.3	11.9	
October.....		8.5	11.3	11.2	11.6	
November.....		9.0	11.8	10.8	11.7	
December.....	11.3	9.1	12.1	10.0	12.4	

In order to bring the items of employment and of accident frequency and severity into plotable relation to each other the employment figures in Table 3 and the rates shown in Table 4 are reduced to index numbers, the first figure in each series, that for December, 1914, being regarded as 100. These series of index numbers are shown in the following table:

TABLE 5.—INDEX NUMBERS OF EXPOSURES AND OF ACCIDENT FREQUENCY AND SEVERITY RATES IN A LARGE GROUP OF STEEL MILLS, FOR YEARS ENDING WITH EACH MONTH, DECEMBER, 1914, TO APRIL, 1919.

[Year ending December, 1914=100.]

Exposures.

Year ending with—	1914	1915	1916	1917	1918	1919
January.....		99.9	117.4	136.1	144.2	153.7
February.....		99.7	119.4	137.0	143.8	155.3
March.....		99.2	122.0	138.0	143.5	157.2
April.....		99.0	124.3	138.8	143.3	158.3
May.....		99.5	126.6	139.7	143.3	.....
June.....		100.5	128.7	140.5	143.1	.....
July.....		101.8	129.9	140.9	145.0	.....
August.....		103.7	130.8	141.9	146.7	.....
September.....		106.0	131.8	142.4	148.0	.....
October.....		108.5	133.0	143.9	149.1	.....
November.....		111.8	133.9	144.1	149.3	.....
December.....	100.0	115.3	134.7	144.6	150.4	.....

Frequency rates, nondisabling accidents.

January.....		98.5	134.6	154.7	118.1	99.3
February.....		98.2	137.9	154.4	115.3	98.7
March.....		99.0	139.4	152.5	114.5	96.7
April.....		101.1	141.1	150.2	112.7	95.1
May.....		103.9	144.8	146.5	111.4	.....
June.....		106.4	147.1	144.7	109.1	.....
July.....		110.2	149.2	141.5	106.3	.....
August.....		114.8	151.6	137.8	104.8	.....
September.....		120.1	152.3	133.3	103.6	.....
October.....		124.4	153.2	129.5	102.2	.....
November.....		128.0	154.4	125.9	100.4	.....
December.....	100.0	131.2	154.4	122.2	100.1	.....

Frequency rates, disabling accidents.

January.....		95.6	111.7	133.6	100.1	76.5
February.....		91.2	116.1	132.3	97.3	76.1
March.....		87.4	120.3	130.4	95.5	75.3
April.....		85.5	122.9	127.5	93.7	74.6
May.....		85.4	123.1	127.9	92.2	.....
June.....		86.8	124.4	125.2	90.4	.....
July.....		87.9	127.8	120.7	88.0	.....
August.....		90.8	131.7	116.0	85.6	.....
September.....		94.3	133.0	112.2	83.7	.....
October.....		99.3	133.6	109.3	80.7	.....
November.....		103.5	134.4	106.5	78.2	.....
December.....	100.0	106.4	133.9	103.0	77.7	.....

Severity rates, disabling accidents.

January.....		86.7	85.8	109.7	86.7	108.0
February.....		87.6	88.5	107.1	92.0	103.5
March.....		83.2	92.9	103.5	97.3	96.5
April.....		76.1	94.7	101.8	99.1	93.8
May.....		70.8	98.2	100.9	102.7	.....
June.....		76.1	97.3	100.0	103.5	.....
July.....		73.5	100.0	105.3	98.2	.....
August.....		76.1	105.3	97.3	105.3	.....
September.....		77.0	100.9	100.0	105.3	.....
October.....		75.2	100.0	99.1	102.7	.....
November.....		79.6	104.4	95.6	103.5	.....
December.....	100.0	80.5	107.1	88.5	109.7	.....

The accompanying ratio chart based on the index numbers shown in Table 5 shows in graphic form the trend of employment and of accident frequency and severity from December, 1914, to April, 1919.

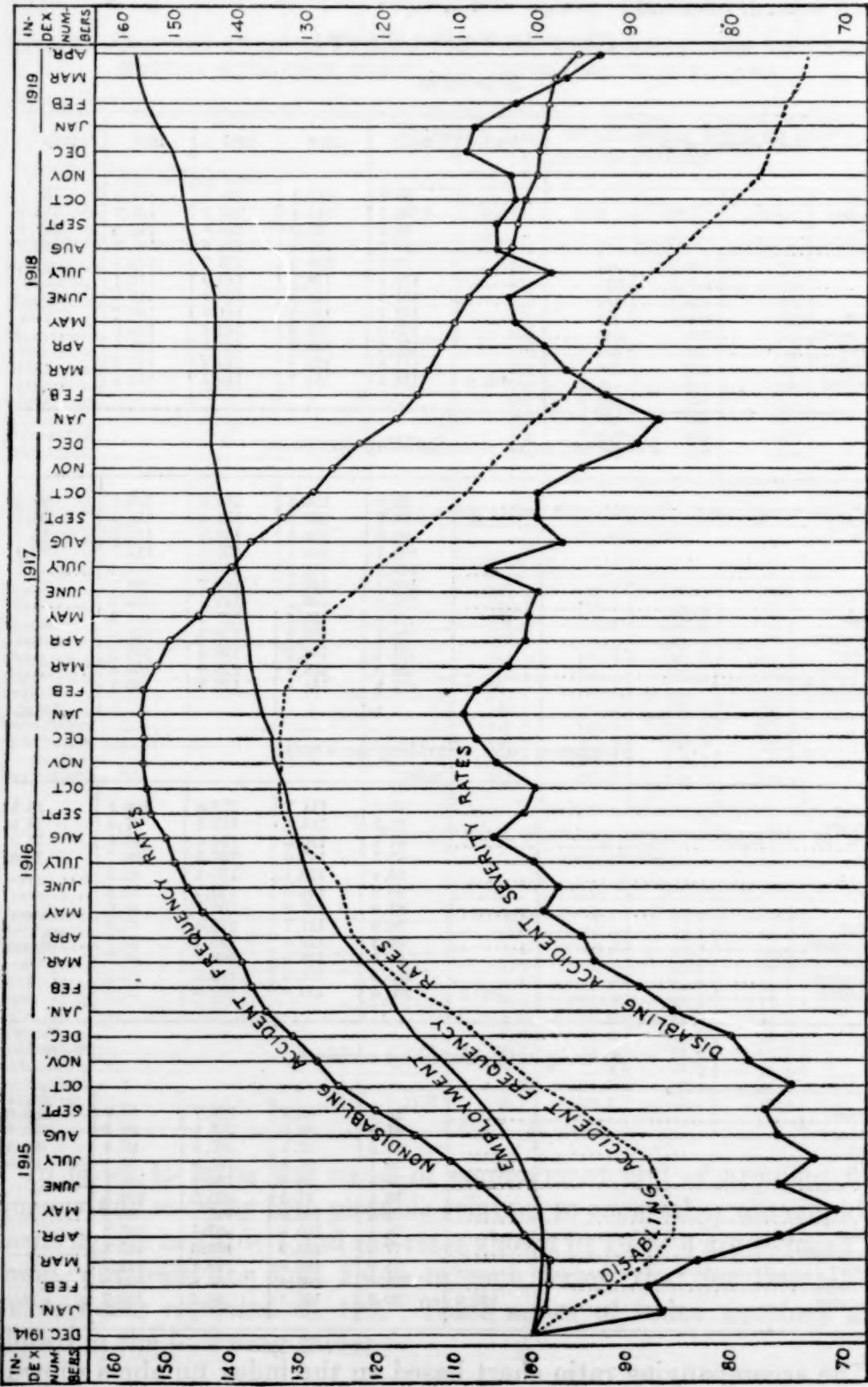


CHART A.

It should be emphasized that such a chart gives no hint regarding the numerical relations of the items. The fact that the frequency rate for disabling accidents runs below the severity rate in the later part of its course does not mean that it is numerically smaller, but that it declined at a more rapid rate. Such a chart as this discloses rates of change only. In this case the numerical relations must be determined by reference to the tables.

This chart covers almost exactly the period directly influenced by war conditions. The high-water mark of prewar activity in the iron and steel industry came in a year including some months of 1912 and running over into 1913. Some decline had occurred before the beginning of the war, and from the middle of 1914 the decline was rapid into 1915. Then came the sudden upward rush followed by a less rapid increase which, in the mills under consideration, has scarcely yet spent its force.

The primary concern at this time is the influence of this upward rush on accident rates. The chart shows the influence of declining industrial activity in the first months of 1914. While employment does not greatly decline it is known that at this period the element of labor turnover which most strongly affects accident rates, namely, the introduction of inexperienced men, was at a minimum. As a result the curves of accident frequency and severity descend markedly and in the case of frequency of disabling accident and severity of the same touch a point lower than any reached in the previous history of these mills.

It is noticeable that the upward trend in the accident rates begins promptly with the increase of employment which indicates industrial recovery, and the rate of increase is nearly the same in all elements as indicated by the nearly parallel course of the three accident curves. The irregularities of the severity curve are due to the fact that the severity curve is mainly determined by the deaths and these, even in such a large group as this, enter into the result irregularly.

The highest accident rates for disabling and non disabling accidents were in the years terminating November, 1916, and January, 1917, while in severity a first peak comes in the year ending January, 1917, with a second peak of the same altitude in the year ending December, 1918. It would thus appear that the calendar year 1916 may be fairly regarded as the summit of the accident wave. This conclusion is strengthened by noting that the months of highest severity are both in 1916, namely, August (19.5 days per 300-day worker) and November (19.8 days), as shown in Table 2.

From the calendar year 1916 onward employment continues to rise, but less rapidly than during the period of adjustment to war conditions. At the same time a downward trend shows itself in all

the accident curves. This continues, steadily in the disabling and nondisabling curves, irregularly in the severity curve, until the year ending January, 1918. From that point the severity curve tends to rise, with some irregularities, to the year ending December, 1918. While this rise in severity is going on the other curves continue their downward movement, recording in both cases a lower point than that reached in 1915.

This rise in severity with falling frequency rates is not a new phenomenon. In this case there are so many factors that it is of unusual difficulty to determine a reasonable explanation. The most that can be done is to point out some conclusions which lie on the surface and offer some suggestions of possible underlying factors which may enter into the situation.

Since the severity rate is mainly determined by the deaths it is instructive to follow the death rates through this period. The rates per 1,000 300-day workers were as follows: 1910, 2.1; 1911, 1.8; 1912, 1.9; 1913, 2.0; 1914, 1.4; 1915, 1.1; 1916, 1.5; 1917, 1.2; 1918, 1.6. The series from 1910 is introduced to show that the high points in 1916 and 1918 are below the earlier peaks in 1910 and 1913.

It has been shown elsewhere¹ that in cases of accidental death as high as 65 per cent may be regarded as preventable by engineering methods. It is clear that the rise in severity in 1918 is due to an increased death rate. Since this is the case it becomes still more reasonable to suppose that, had these possibilities of death been foreseen and adequate engineering provision made in advance, the rise might have been lessened, possibly prevented.

Two other facts which have a bearing on the results shown by the chart may be mentioned. First, the period of sharp rise in employment, which is accompanied by the even sharper rise in the accident rates, was a period in which labor recruiting—that is, the introduction of new men—was proceeding at a still more rapid rate. When recruiting slackened the rise in accident rates came to an end, and with the establishment of relative stability considerably declined. Second, the year 1918 was productively the “big year.” With but slight increase in employment the mills were all active in production in an extreme degree.

It is already established that a period of rapid labor recruiting tends strongly to the increase of all accident rates. When all the factors in such a situation as that presented by the chart are known, it may be found that, with a relatively stable labor force, intensified industrial activity, while allowing declining rates for minor injury, tends to increase those for more severe injury. Since this rise and fall in severity is coincident with the onset and abatement of the

¹ See MONTHLY LABOR REVIEW for December, 1918, pp. 1-17.

"flu" epidemic it may be suggested that the physical condition of the labor force due to the disease may have been an important factor in producing the rise.

It is obvious that the efforts of the safety organization in these mills were well adapted to meet and control minor injury. The curve of frequency is a sure index of success or failure in this particular. The organization did not, probably could not, control the tendency to rise during the period of adjustment to war conditions, but it did prevent a rise above the peak established in the prewar conditions of 1913. Further, with the establishment of relatively stable conditions, it was able to bring about a remarkable and continuous decline in the frequency rates.

It is also apparent that the methods employed were not equally and continuously competent to cope with more serious injury. A declining frequency rate tends, in proportion to its weight, to depress the severity rate. If, with the declining frequency rate, the severity rate rises, this, of necessity, indicates an increase in serious injury sufficient to more than overbalance the influence of the declining frequency. It must not be overlooked in this connection that the high points of severity in this period are below those of the prewar period.¹ This is to the credit of the safety organization. It is also reassuring to note that at the end of the period there is a considerable and rapid decline in the severity rates.

Whenever the condition here shown is found it may always be reasonably suspected that the real condition has been obscured by the favorable indications of the frequency rates and that in the natural optimism engendered by attention to these the necessity for rigorous study of the engineering factors has been overlooked. The entertainment of such a suspicion is in a measure justified by the fact that wherever similar cases have been open to intensive study it has been the invariable experience to find some failure on the engineering side. As intimated above, the condition now under consideration is far too complicated to justify a positive statement regarding it.

The contradictory indications of the frequency and severity rates for the years ending in 1918, as shown in the chart, are even more forcibly brought out by considering the monthly rates for the year 1915 contrasted with those for 1918. This is done in the table following.

¹ See death rate on p. 230.

TABLE 6.—ACCIDENT FREQUENCY AND SEVERITY RATES IN A LARGE GROUP OF STEEL MILLS FOR EACH MONTH OF 1915 AND 1918.

Month.	Frequency rates.		Severity rates.	
	1915	1918	1915	1918
January.....	97.2	137.2	4.2	13.4
February.....	99.8	113.4	10.9	16.9
March.....	119.0	133.8	7.8	16.8
April.....	132.2	124.5	8.3	12.2
May.....	159.9	130.6	1.9	11.6
June.....	177.9	123.0	12.8	11.7
July.....	188.0	121.4	3.7	9.4
August.....	184.5	124.8	12.5	16.0
September.....	186.3	107.1	12.0	10.3
October.....	191.7	97.6	9.1	5.0
November.....	172.0	94.9	13.5	14.9
December.....	173.3	94.6	10.8	11.9
Total.....	159.5	116.4	9.1	12.4

It will be observed that in 9 of the 12 months 1918 has lower frequency rates than 1915, but that in 9 months, though not the same months, the severity rates are higher in 1918. This almost complete opposition in the two years is very significant. It shows that an illusion may be created by exclusive attention to the general frequency rate. Evidently the two years were sufficiently different in the conditions prevailing to cause comparisons based on either the frequency rate or the severity rate alone to be misleading. The nature of these differences has already been indicated. One year was a period of reconstitution of the working force, the other, with a relatively stable working force, was an interval of intense industrial activity.

Two conclusions are amply justified by the study of this experience:

- (1) Anything like a satisfactory understanding of an accident condition is impossible without the use of severity rates.
- (2) The methods which satisfactorily control minor injury will not suffice for the control of death causes.

Industrial Accidents in Pennsylvania in 1918.

A BULLETIN recently issued by the Pennsylvania Department of Labor and Industry¹ contains four groups of tables classifying and analyzing industrial accidents in cases of disability for 2 days or more which occurred in the State during the year 1918. The first group covers all accidents, the second includes fatal accidents, the third group includes compensation cases, and the fourth group is a summary of all accident data. A total of 184,844 industrial accidents is recorded, including 3,403 fatal accidents, 53,783 (29.1 per

¹ Pennsylvania. Department of Labor and Industry. The Bulletin, vol. 6, No. 1, series of 1919. Harrisburg, 1919. 277 pp.

cent) serious cases where the injury resulted in a loss of more than 14 days, and 127,658 (69.1 per cent) cases of a minor nature causing disability of 2 days, but not more than 14 days. The total number of days lost is given as 2,767,471, and the wage loss is stated to have been \$10,286,872. Of the total number injured, 1,281 were minors under the age of 16 years.

Compensation was awarded and paid in 69,920 cases (37.8 per cent), 2,607 being fatal cases. The amount of compensation paid, covering the 67,313 disability cases, was \$4,780,197, or an average of \$71 per case; the amount paid for the 2,607 fatal cases was \$6,859,718, or an average of \$2,631.27 per case.

The following table shows the number and per cent of compensable accidents and the amount of compensation paid in each industry and the per cent this forms of the total and the average compensation paid per case.

NUMBER AND PER CENT OF COMPENSABLE ACCIDENTS AND AMOUNT AND PER CENT OF COMPENSATION PAID, BY INDUSTRY, IN PENNSYLVANIA, IN 1918.

Industry.	Accidents.		Compensation paid.		
	Num-ber.	Per cent of total.	Amount.	Per cent of total.	Average per case.
Building and contracting.....	4,184	5.98	\$799,250	6.87	\$191.03
Chemicals and allied products.....	1,455	2.08	480,879	4.13	330.50
Clay, glass, and stone products.....	1,787	2.56	204,496	1.76	114.44
Clothing manufacture.....	459	.66	20,523	.18	44.71
Food and kindred products.....	1,298	1.86	145,904	1.25	112.41
Leather and rubber goods.....	522	.75	45,622	.39	87.40
Liquors and beverages.....	420	.60	74,819	.64	178.14
Lumber and its remanufacture.....	1,653	2.36	117,483	1.01	71.07
Paper and printing industries.....	833	1.19	85,780	.74	102.98
Textiles.....	979	1.40	74,921	.64	76.53
Laundries.....	118	.17	9,294	.08	78.76
Metals and metal products.....	22,222	31.78	2,668,281	22.92	120.07
Mines and quarries.....	23,161	33.12	5,125,749	44.04	221.31
Public service.....	4,985	7.13	930,122	7.99	186.58
Hotels and restaurants.....	381	.54	32,990	.28	86.59
Mercantile establishments.....	1,387	1.98	125,887	1.08	90.76
Jobbers and warehouses.....	420	.60	52,678	.45	125.42
Municipalities.....	501	.72	154,537	1.33	308.46
Tobacco and its products.....	63	.09	6,748	.06	107.11
Miscellaneous.....	3,092	4.42	483,952	4.16	156.52
Total.....	69,920	100.00	11,639,915	100.00	166.47

Bituminous Coal Mine Fatalities in Pennsylvania, 1914 to 1918, Inclusive.

AN ANALYSIS of bituminous coal mine fatalities in Pennsylvania for the five-year period 1914 to 1918 has recently been made under the direction of the State Insurance Department, based on the records of the Department of Mines. It includes only those mines which employed 10 or more men underground, the maximum number of such mines being "somewhat less than 2,000."

Coke accidents are not included in the tabulations. The table following shows for the five-year period the number of fatalities and the fatality rates per 1,000,000 tons of coal mined and per 1,000 full-time workers. The number of full-time workers, it is explained, was obtained by multiplying the "average number of employees" reported for each mine by the number of days that the mine operated and dividing the product by 250. "The 8-hour day being generally prevalent, a 250-day employee is practically equivalent to a 2,000-hour worker, which is the standard adopted by the United States Bureau of Mines." It is admitted, however, that the average number of employees is an unreliable basis of computation, since "most operators do not keep such a record,¹ and practically none of them take the trouble to make up the reported average number of employees from such records."

PRODUCTION OF BITUMINOUS COAL MINES IN PENNSYLVANIA AND FATALITY RATES PER 1,000 250-DAY WORKERS AND PER MILLION TONS MINED, 1914 TO 1918.

Period.	Production in net tons.	Number of 250-day workers.	Number of fatalities. ¹	Fatality rate—	
				Per 1,000 250-day workers.	Per 1,000,000 tons mined.
1914.....	145,885,000	160,753	408	2.54	2.80
1915.....	157,420,000	159,089	412	2.59	2.62
1916.....	169,124,000	169,130	395	2.34	2.34
1917.....	171,074,000	185,821	478	2.57	2.79
1918.....	177,217,000	189,028	483	2.56	2.73
1911-1915.....	779,290,000	851,093	2,242	2.63	2.88
1914-1918.....	820,720,000	863,821	2,176	2.52	2.65
1916-1918.....	517,415,000	543,979	1,356	2.49	2.62

¹ These are "ordinary" fatalities, that is, fatalities which did not involve a catastrophe, which is defined as an accident causing 5 or more deaths.

During the five-year period, 57.2 per cent of the fatalities were caused by falls of roof and coal and 26.1 per cent were chargeable to mine haulage.

A table of compensation costs covering the period 1916 to 1918, inclusive, shows a total of \$2,800,737 paid in benefits on account of 732 fatalities and 456 permanent disabilities. Of the total of 281 specific injuries, 154, or 54.8 per cent, involve injury to eyes.

¹ That is, the number of days that each man worked during the year.

INDUSTRIAL HYGIENE AND MEDICINE.

Does Industrial Medicine Pay?

THE value, from an economic viewpoint, of industrial medicine is considered by Dr. Harry E. Mock in the second of a series of articles giving a résumé of its development, in the *Journal of Industrial Hygiene*.¹ Dr. Mock believes that one of the greatest sources of saving to the employer is a system of physical examination of all applicants for work before employment, the value to the employer depending upon the thoroughness of these examinations and the amount of cooperation between the employment department, the medical department, and the foreman.

A great financial waste which can not be accurately estimated results from employing workers without any effort at a physical selection for their work, according to the writer. Dr. Mock suggests some of the sources of waste arising from the employment of the physically unfit:

1. The unfit who later must be discharged because of inability to do the work.
2. The unfit who may continue to work for a few months or a year, but with a gradual decrease in their efficiency, due to advancing disease. Sooner or later they are forced to stop work, and during the entire period of employment they have been a source of loss to the company employing them.
3. Those who because of their physical condition are subject to frequent accidents.
4. Those who suffer accidents which ordinarily would not be serious, but, because of coincidental physical conditions, cause prolonged disability or even death.
5. Those having some contagious disease when employed, who communicate it to others in the working force. The acute contagious diseases are more common, but tuberculosis and syphilis also cause a great loss.
6. Employment of the mentally deficient, the moral degenerate, and other types of mentally handicapped men who make up a certain percentage of the floating labor. An observing industrial physician will pick out this type during the course of his examination.

Examinations by companies having an efficient medical system are made not only for the purpose of selecting only the physically fit and refusing employment to the unfit but also for the purpose of preventing from going to work persons with diseased conditions which would make any kind of work dangerous for them; for the purpose of selecting for persons with certain defects proper jobs, not involving work that would be hazardous for them, but for which they would be

¹ Industrial medicine and surgery—a résumé of its development, scope, and benefits, Part II, by Harry E. Mock. In the *Journal of Industrial Hygiene*, Boston, September, 1919, pp. 251-254.

efficient; and for the purpose of preventing persons with contagious diseases from mingling with the old working force.

The author gives the following statistics which he has collected from 10 large industries having excellent medical staffs and which base their rejections, for the most part, on the standards enumerated:

APPLICANTS EXAMINED AND APPLICANTS REJECTED BY THE MEDICAL STAFFS OF 10 INDUSTRIES.

Item.	Number.	Per cent.
Total number of applicants examined in 1 year.....	118,900	.....
Total number employed having disabilities that did not interfere with selected work..	41,158	34.7
Total number rejected for work because of disabilities.....	11,433	9.7
Total number having no disabilities of any moment.....	66,309	55.6
Total number of regular employees in those 10 industries.....	102,400	.....

In commenting on these figures Dr. Mock states that it is fair to assume that these 11,433 applicants who were rejected for work would have soon lost their positions because of inefficiency, or would have left because of sickness; certainly by the end of a year practically all of these would have been eliminated from the working force.

Calling attention to several estimates that have been made of the cost of labor turnover, these estimates varying from \$10 to \$200, with one authority suggesting \$35 as sufficient to cover the cost of hiring and training a worker, the author arrives at the conclusion that the 11,433 rejected cases in the table can be estimated as saving the companies rejecting them \$400,155 in labor turnover. It is added, however, that a committee of representative authorities on this subject more recently estimated the cost of hiring and training a man at \$45, which would add over \$100,000 additional profit as a result of the practice of medical examination of applicants for employment.

Magnus Alexander, in a comprehensive study of the cost of health supervision in 99 different industries, found that the average cost per employee for all medical work was \$2.50. Using this figure as a fair average, and taking the regular number of employees as 102,400, we can estimate the cost of the entire medical work in these 10 industries at \$256,000. Thus the examination of applicants alone undoubtedly saved these companies over \$140,000 during the course of one year.

1. Saving to 10 concerns from rejection of physically unfit.... \$400,155
2. Cost of entire medical work in these concerns..... 256,000
3. Profit to the concerns from this one branch of medical work
alone..... 144,155

Dr. Mock believes that it is fair and conservative to estimate that at least 10 per cent of those applicants with physical disabilities who were employed would have left very shortly if they had not been placed on jobs suitable for their physical condition, thus adding to their efficiency, contentment, and health protection.

This, it is figured, would add another \$144,000 to the profit of the employers from this system.

While the above figures can only be estimated, yet the most skeptical must surely agree that the examination of applicants for work, and the rejection of the physically unfit, even when based on the most humane standards for rejection, certainly pays any concern adopting this system. And the saving to that concern from this procedure alone will more than pay the costs of the most efficient human maintenance department they can establish.

As an example of the value of examination in the prevention of the spread of contagious and infectious diseases among employees the author cites the case of one Chicago industry employing 15,000 people in which during a period of six months 44 contagious cases representing six different types of acute exanthemata were discovered. A great loss to the company from six different epidemics was thus prevented.

That the value of industrial medicine may be fully appreciated by employers Dr. Mock emphasized the duty of every company surgeon, safety engineer, and welfare worker "to show that the benefits to the employer are in direct ratio to the thoroughness and completeness of the plan which he adopts for the conservation of the health of his employees."

Elimination of Industrial Poisoning in Felt Hat Making.¹

THAT a method has been found practicable for the making of felt hats which eliminates the evils of "hatters shakes," "hatters asthma," and other results of mercurial poisoning in the workers in this industry is the claim of its discoverer, according to an article by Christine Kefauver, in the *Monthly Bulletin of the Department of Health, New York City*.²

After a brief description of the "acid-nitrate-mercury" method, which is the recognized method of preparing felt for hat making and during every process of which the workers are exposed to the fumes of mercury, the author contrasts with it the new "no-nitrate" method discovered by William Braun, a brush maker by trade, who, some years ago, became interested in the making of felt, and, incidentally, felt hats. It appears that his investigations developed the fact that the reason for treating the hides with the nitrate of mercury was to afford opportunity for the acid to penetrate the

¹ Cf. article on Sanitary Standards for the Felt Hatting Industry in New Jersey, in *MONTHLY REVIEW* for March, 1916, pp. 66-73.

² Felt hat making by the acid-nitrate-mercury method, and the no-nitrate method, by Christine Kefauver. In *Monthly Bulletin of the Department of Health, City of New York*, May, 1919, pp. 127, 128.

hair and, by roughening the surface of the hair, cause it to mat more easily. Mr. Braun believed that the quickest way to remove the life from the hair, which is the purpose of the nitrate of mercury treatment, would be to treat the hair after separating it from the skin. Accordingly, the first step in his method is to shave the hair from the pelt, and then immerse the hair in a solution of sodium carbonate, "which is raised to a temperature of from 210° to 220° F., and kept at this temperature for from 18 to 25 minutes, depending upon the variety of the hair." This removes the animal fats and acids, and softens the hair so that it will "felt" readily. It is then worked and sized immediately instead of after several days as under the old process.

It is stated that by this "no-nitrate" process a hat may be completed and made ready for sale the same day the hair is removed from the raw pelt. Aside from the tremendous gain to the workers and the public in the elimination of the hazards incident to this trade, the saving in the cost of production is said to be enormous, the author stating that under the nitrate of mercury method a unit of 35 pounds of treated fur ready for felting costs \$5, while under the new method the same fur, ready for felting but not acid treated, costs 2 cents a pound.

Finished hats which under the old method cost \$21 a dozen wholesale, can be produced by this method and sold complete, including all leather sweat bands, for \$9.50 a dozen. These hats are being made, and have been made, for the past four years, and have proved perfectly satisfactory in every respect, even under the most exacting tests.

Occurrence, Course, and Prevention of Chronic Manganese Poisoning.

THE occurrence, course, and prevention of chronic manganese poisoning is the title of an article by David L. Edsall, M. D., Massachusetts General Hospital, F. P. Wilbur, M. D., and Cecil K. Drinker, Harvard Medical School, in the *Journal of Industrial Hygiene* (Boston) for August, 1919 (pp. 183-193).

The article opens with a brief statement of the commercial uses of manganese, notes three types of employment in which chronic poisoning is known to have occurred, gives a historical summary of the occurrence of manganese poisoning, and follows with a description of its causation, its pathology, the courses of the disease, in which connection the histories of three specific cases are cited in some detail, and then closes with suggestions for prevention.

Manganese, according to these authors, has been employed in the manufacture of chlorine and oxygen, in making dry batteries, in glass works for cleaning and coloring molten glass, for coloring brown

and black glasses, to destroy carbon in the production of enamel, as a paint for fayence and porcelain, for glazing, for coloring and graining soaps in anilin and alizarin factories, in various processes connected with the manufacture of glass, oil, and varnish, and finally in the making of cement and glazed brick. Certain manganese colors, such as manganese brown, anhydrated peroxide of manganese, have had extensive use. Manganese bistre and manganese violet are other examples of dyes made from this metal. It seems that in Holland and Germany manganese sulphate has occasionally been used as a fertilizer, but not very widely, the matter having been apparently in the experimental stage when the war began; finally, manganese has been extensively used as an alloy with steel and nickel.

The three types of employment in which chronic manganese poisoning is known to have occurred are stated to be the following:

1. In French workers handling manganese dioxide in the manufacture of chlorine for bleaching powder.
2. In Germans engaged in grinding manganese dioxide as a stage in commercial utilization for various purposes.
3. In mill employees in the United States who work in a dust containing manganese as oxides and silicates.

In the historical summary mention is made of 15 foreign cases which developed from exposure to manganese dioxide. Thirty-nine American cases are noted, one of which resulted from eight months spent in shoveling Japanese manganese ore into a hopper, an extremely dusty task, while the other 38 cases occurred as the result of working in dusty parts of a mill engaged in separating manganese from other ores. In this mill, it is stated, the crude ore contains 9 per cent manganese, combined as oxides and silicates; "lead never appears in the crude ore except in the most minute traces, and arsenic is entirely absent."

The process of separating the manganese is a dry one, the manganese and iron fractions being removed early in the operation by the use of very large magnetic separators. The mineral dust is carried on wide conveying belts between the poles of extremely powerful magnets. The iron and manganese-containing particles at once move toward the near-by magnetic pole, which they are prevented from reaching by a second conveying belt passing between them and the pole in question. They cling to the under side of this conveying belt until carried outside the main strength of the magnetic field, where they fall into a hopper. The ore dust must be extremely fine and dry to lend itself successfully to such an operation, and in the drying, conveying, and separating there are large opportunities for impregnation of the atmosphere with dust.

As in the case of lead poisoning, manganese poisoning is developed by inhaling and swallowing dust particles. "The ore in question is readily soluble in the hydrochloric acid of the gastric juice," and those "particles reaching the lungs are undoubtedly coughed up and swallowed, together with an infinity of other particles which are

swallowed directly. Reaching the stomach the manganese is converted into manganese chloride and absorbed." The most rapid development of permanent crippling either in this country or abroad has required four months and five days' exposure to a dusty atmosphere, according to the authors. The authors state that the disease itself has never resulted fatally, either in Europe or in this country. The symptoms of manganese poisoning, which are said to be strikingly definite, and the course of the disease are indicated in the following summary statement:

1. A history of work in manganese dust for at least three months.
2. Languor and sleepiness.
3. Stolid, mask-like facies.
4. Low, monotonous voice. Economical speech.
5. Muscular twitching, varying in degree from a fine tremor of the hands to gross rhythmical movements of the arms, legs, trunk, and head.
6. Cramps in the calves and a complaint of stiffness in the muscles of the legs, the cramps usually coming on at night and being worse after a day of exertion.
7. Slight increase in tendon reflexes.
8. Ankle and patellar clonus. Frequently by stretching any of the muscles of the body it is possible to elicit rhythmical contractions. Romberg sign is inconstant; there is no incoordination.
9. Retropulsion and propulsion.
10. A peculiar slapping gait. The patient keeps as broad a base as possible, endeavoring involuntarily to avoid propulsion. The shoes are worn evenly and we have not been able to convince ourselves of the pronounced tendency to walk on the region of the metatarsophalangeal joints, a feature strongly emphasized by von Jaksch [one of the authorities referred to in historical summary].
11. Occasionally, uncontrollable laughter; less frequently, crying.
12. Uniformly absent are any disturbances of deep or superficial sensation, eye changes, rectal, genito-urinary or gastrointestinal disturbances, reactions of degeneration, blood, urine, and spinal fluid alterations. It is significant that, unlike lead, manganese produces no life-shortening degenerations. Seriously poisoned men are long-lived cripples. The metal apparently makes a very definite attack upon some nonvital portion of the neuromuscular system, destroys it thoroughly, if time for action is permitted, and leaves the victim quite well in every other respect.

There appears to be no satisfactory method of treatment. Early cases are said to recover spontaneously if placed in dust-free environment. Prevention, through methods of dust removal, seems to be the only way of combating the disease. Once the symptoms appear it is essential that the worker be removed to a dust-free job before harm is done. In such cases recovery is comparatively rapid.

In conclusion, the authors urge industrial physicians, who may have opportunity to observe men handling manganese compounds, to be on the alert for cases of poisoning and to report their observations for the benefit of others.

Public Health Service Program to Meet After-the-War Needs.

THE United States Public Health Service has issued, as a supplementary report,¹ a program intended especially to meet after-the-war needs by outlining health activities which are practicable and which yield the maximum result in protecting national health, thus diminishing the annual toll of thousands of lives taken by preventable diseases and insanitary conditions. The success of this program will depend, it is stated, on the active cooperation of Federal, State, and local health authorities, and this cooperation would seem to be best secured on the Federal aid extension principle.

The program is itemized under 14 headings the first of which is industrial hygiene and is given here in full.

1. Continuing and extending health surveys in industry with a view to determining precisely the nature of the health hazards and the measures needed to correct them.
2. Securing adequate reports of the prevalence of disease among employees and the sanitary conditions in industrial establishments and communities.
3. National development of adequate systems of medical and surgical supervision of employees in places of employment.
4. Establishment by the Public Health Service, in cooperation with the Department of Labor, of minimum standards of industrial hygiene and the prevention of occupational diseases.
5. Improvement of the sanitation of industrial communities by officers of the Public Health Service, and cooperation with State and local health authorities and other agencies.
6. Medical and sanitary supervision by the Public Health Service of civil industrial establishments owned or operated by the Federal Government.

Health Work for the Whitley Joint Industrial Councils.

THE Whitley councils of the pottery and printing industries in Great Britain set up, about a year ago, a joint health committee which sanctioned an experimental scheme for regular medical observation and research in industry. Commenting on the results which were described by Mr. E. Halford Ross in a lecture delivered before the Industrial Reconstruction Council, the *Lancet* says:²

The experiment * * * was made in two large printing works, where the employees were informed by both their employer and the secretary of the trade-unions that a doctor would attend periodically to advise the workers on health matters. As a

¹ Program of the Public Health Service intended especially to meet after-the-war needs. Treasury Department, United States Public Health Service. Supplement No. 35 to the Public Health Reports, May 9, 1919. Washington, 1919. 8 pp.

² The *Lancet*, London, July 5, 1919, pp. 24, 25.

result many came forward and asked advice. Observations were made while work was in progress, and much was done to show employees how they might work under better conditions. In addition, numerous cases of disability were discovered and remedied, and the experiment was considered to have been most successful. Certain researches were done concerning fatigue, hours of work, the provision of seats, and the advantages of welfare work generally. It was discovered that the health committee of each industry is the best means of carrying out this work. Each industry differs; each has its own requirements. It is, therefore, much better for each industry to undertake its own welfare matters than to leave it entirely to any Government department. This experiment suggests that further valuable research in industrial medicine might be carried out on a larger scale under similar conditions.

Sufficient work has already been done in London during the last two and a half years to indicate some of the lines along which research should be pursued. Catarrh, bronchitis, and chronic cough are the most common obvious ailments which affect the workers, and it is very rare to find a large office without somebody in it suffering from a "cold." It is quite certain that a considerable sum of money is lost in London every week owing to the reduction of output caused by these complaints, in addition to the wages paid during sickness. It might possibly be demonstrable by experiment that economy would be effected if workers suffering in the early stages of catarrh were persuaded to stay at home until they recovered. Anemia is also of frequent occurrence among the young women and girl workers, and handicaps their work greatly. Out of several hundred employees examined in the three large clothing factories 63 per cent of the girls were found suffering from anemia. This common disease can be easily prevented if taken at once when it appears. If left until well advanced, each case may require months of treatment. Its prevention is a matter of education, and a little medical advice to parents in childhood will stop much of this disabling affection. Here is a matter which an industrial medical service could take up at once, and in which, working in conjunction with the school medical service, it would achieve wonders in a very short space of time. Anemia has a most distracting effect on work and may last for years, producing far-reaching results in motherhood. Again, from work that has been carried out in connection with munition works during the war it appears probable that improper feeding has been a considerable factor in the production of fatigue, and that the short, hurried, and scrambled midday meal, accompanied by the discomfort of waiting in queues and the curtailment of rest, has resulted in a diminution of output. These questions are for scientific study rather than for political speculation, and under the aegis of the Whitley councils medical men might well find an opportunity for impartial observation in a sympathetic environment.

WORKMEN'S COMPENSATION.

Workmen's Compensation Legislation of 1919.

Compiled by LINDLEY D. CLARK.

IN THE MONTHLY LABOR REVIEW of June, 1919, pages 255 to 259, a brief statement was given of the main provisions of newly enacted laws in the States of Missouri, North Dakota, and Tennessee. It was then stated that the list of noncompensation States was thus reduced to a contiguous group occupying the southeastern corner of the United States. This area has been broken by the enactment of a compensation law by the Legislature of Alabama, approved August 23. Notice should also be taken of a provision of the appropriation act of the District of Columbia which places public employees of the District within the scope of the law providing for compensation of civil employees of the United States. This law is to be administered in behalf of such public employees by the same commission that administers the statutes in behalf of the Federal service. A large part of the industrial employees of the District are provided for, but the needs of private workers still remain to be met by such action as Congress may at some time take.

The Alabama statute is an elective one with an abrogation of the common-law defenses in case the presumed election provided for by the law is rejected. A regrettable provision of the act is the exclusion from its operations of all employers who regularly employ "less than 16 employees in any one business"; public service is also excluded. The usual exclusion of domestic service, foreign labor, and persons whose employment is casual and not in the usual course of the trade or business of the employer is found. Acceptance of the provisions of the act by employers of the excluded classes may be made by the filing of a written notice with the probate judge of the county, but a special provision is to the effect "that in no event nor any circumstances shall this bill apply to farmers and their employees." A unique provision is one that limits attorneys' fees to not more than 10 per cent of the compensation awarded or paid, and no part of the compensation shall be paid as fee without approval by a judge of the circuit court.

Notice to reject the act is effective after 30 days, and a withdrawal of the rejection may be made by notice likewise effective. Direct settlements are authorized but shall not be for substantially less than

the amounts fixed in the act unless, upon the written consent of the parties, a judge of the circuit court or of the probate court "determines that it is for the interest of the employee to accept a lesser sum and approves such settlement." Settlements submitted to a court for approval are to have the effect of judgments, and the costs, which shall not exceed \$2, are to be borne by the employer. The basis of compensation is 50 per cent of the average weekly earnings of the injured employee, with a maximum of \$12 per week and a minimum of \$5 unless the wages are less. A schedule for specified injuries causing partial disability is embodied in the act. Permanent total disability entitles the injured person to benefits for not more than 550 weeks with a \$5 maximum after the first 400 weeks, the total amount not to exceed \$5,000. Additional allowance is provided for children, the total not to exceed 60 per cent of the wages nor \$15 weekly. Payments to children cease at the age of 18 and to dependents generally in the event of death or marriage. Death benefits are limited to a term of 300 weeks.

Medical and surgical aid for the first 60 days at a cost not exceeding \$100 is to be supplied, and in the event of death, \$100 funeral expenses.

Two weeks' waiting time is provided, but if the disability lasts as long as four weeks, payment for the first two weeks is to be made with the first installment after four weeks.

No administrative commission is provided for, the adjustment of disputes resting with the courts. However, the Director of the Department of Archives and History is ex officio compensation commissioner for the purpose of supplying blank forms and literature such "as he shall deem requisite to facilitate or promote the efficient administration of this act, other than papers relating to court proceedings"; he is to keep records of all direct settlements, which are to be reported to him, and also of awards by the courts, which are likewise to be reported to him. A tabulated and statistical report showing results of the operation of the act, facts reported as to insurance, self-insurance, etc., showing the premium rates charged in Alabama and other States, and recommendations for amendments or improvements, are to be made to the next regular session of the legislature. Insurance is optional, but where desired, whether in mutual companies, stock companies, or otherwise, it must be effected in accordance with provisions contained in the law and in companies authorized to conduct business in the State.

While the law can not be unreservedly commended by reason of its rejection of an administrative board and of compulsory insurance, and also because of the excessively large number of employees necessary to bring the employer within the act, it is a matter of congratu-

lation that an entering wedge has been inserted into the backward territory in this quarter of the United States, there now being but six States without a compensation law.

Of the 38 States having compensation laws prior to this year, the legislatures of 34 were in session during 1919. Amendments were effected to the greater number of the laws of these States, touching upon a wide range of subjects. In practically every case the result of the amendments was to liberalize the act either in scope, amount of benefits, scale, medical aid, or otherwise. The waiting time was reduced in 9 States, New Mexico reducing its exceptional 3 weeks' waiting time to 2, while other States reduced 2 weeks' waiting time to 10 days (Colorado, Maine, New Jersey, and Pennsylvania); Michigan and Oklahoma reduced the waiting time from 2 weeks to 1 week; California from 10 days to 7, and Utah from 10 days to 3. The custom of paying for the waiting time in case the disability continues beyond a fixed period is on the increase. Connecticut, Delaware, and Illinois eliminated the waiting period after 4 weeks of disability, Oklahoma after 3 weeks, and Nevada after 2 weeks.

The scale of benefits was advanced from 50 per cent to a higher rate in 6 States, the present compensation being 60 per cent in Iowa, Maine, Michigan, Nevada, and Pennsylvania, while New Jersey moved up to 66 $\frac{2}{3}$ per cent; Minnesota advanced from 60 to 66 $\frac{2}{3}$ per cent, and Utah from 55 to 60 per cent. The benefits in Wyoming were liberalized in a variety of ways. Something of the same effect was produced in West Virginia by striking out the provision requiring the employees to contribute to the payment of insurance premiums.

The period of compensation for partial disability was extended from 312 weeks to 520 weeks in Connecticut, and from 300 weeks to 500 weeks in Michigan. In Connecticut and Vermont the scheduled benefits for specified injuries are to be paid in addition to the benefits payable during the period of total disability.

It is doubtless in partial recognition of the increased cost of living that the weekly maximum benefits are increased in a considerable number of States, though it is apparent that there is a wide difference of opinion in the minds of the legislators as to what is a suitable maximum; thus, in Colorado the increase was from \$8 per week to \$10, while the Wisconsin maximum, which was \$15 per week for industrial employees, was increased to \$22.50 per week. The present maximum in Connecticut and Oklahoma is \$18; in Massachusetts and Utah, \$16; in Delaware, Maine, Minnesota, Nebraska, and Ohio, \$15; in Michigan, \$14; in Montana, \$12.50; and in New Jersey, New Mexico, and West Virginia, \$12. The most common maximum from which the advances were made was \$10, though Connecticut already paid \$14 and Utah and Wisconsin, \$15. The monthly payment in Washington for disability was advanced from \$35 to \$50.

In a few cases the desirability of thorough medical treatment is recognized by giving discretion to the compensation boards or commissions to pay larger sums in exceptional cases; while in a number of States the statutory limitation is advanced, both period and amount being doubled in Colorado. In Delaware the limit of \$25 was trebled, in Maine it was advanced from \$30 to \$100, and in Utah from \$200 to \$500. Other States make enlarged provision in a variety of ways. New Mexico stands alone in reducing the period during which medical aid is to be furnished, the change being from three weeks to two weeks, in accordance apparently with the reduction of waiting time, the theory seeming to be that when compensation begins medical aid may end. A medical aid board is created in Washington to have general supervision of the recently adopted system of local medical benefits. California, Minnesota, and Pennsylvania recognize the necessity of meeting the needs of disabled workers by some provision for rehabilitation, while in Connecticut and Wisconsin occupational diseases are included within the scope of the act.

The problem of the casual employee is approached in different ways in several States, the phrase being made to read "casual and" instead of "casual or" in Colorado and Utah; Nevada and New Jersey also limit the term "casual," while in Michigan the casual employee is no longer regarded as an exception, but is regularly included within the act. The term "casual employment" is also eliminated from the West Virginia statute, but compensation is limited to persons "regularly employed."

These are not all the changes that will appear in the complete analysis of the laws and their amendments that will be dealt with later in a bulletin, but they are fairly indicative of the tendency to make the laws more nearly conform to their name by providing compensation that will actually meet the needs of the injured workers and their families.

Special Examination into Ohio State Fund.

A RECENT comprehensive examination into the solvency and merits of the Ohio State workmen's compensation insurance fund has just been made by two impartial actuaries.¹ The purpose of this actuarial examination were (1) to test the soundness of the actuarial principles and rating system employed and to ascertain to what degree the fund was solvent or insolvent, and (2) to have the benefit of expert advice in improving the service to employer

¹ Actuarial-audit of the Ohio State insurance fund as of Mar. 1, 1919, made by Examiner E. H. Downey, special deputy, Pennsylvania Insurance Department, and Examiner Miles M. Dawson, consulting actuary of New York City. Columbus, Ohio, 1919, 66 pp.

and employee. In order to insure a fair, competent, and impartial examination the Ohio Industrial Commission requested the Ohio Manufacturers' Association, the Ohio State Federation of Labor, and the State auditor, acting jointly, to select the examiners. They chose Mr. E. H. Downey, special deputy, Pennsylvania Insurance Department, and Mr. Miles M. Dawson, consulting actuary of New York. Mr. Downey made the actual investigation while Mr. Dawson wrote an opinion based upon an analysis of Mr. Downey's report.

Ohio is by far the largest industrial State having an exclusive workmen's compensation fund. Furthermore, the Ohio State fund, measured by the actual volume of benefits insured, has now become the largest carrier of compensation insurance in the United States. In view of these facts, and also in view of the great amount of criticism to which the State fund has been subjected ever since its creation, the findings and conclusions of these impartial examiners become of momentous importance to the compensation insurance world.

The following is a summary of the facts and conclusions as reported by the examiners:

Summary of Facts by Mr. Downey.

1. The Ohio State fund, after deducting unearned premiums and setting aside ample reserves to carry all claims to maturity, had on March 1, 1919, a surplus of more than \$3,600,000. Owing to this highly solvent condition, the fund can safely distribute about one-third of its surplus to its subscribers in the form of a cash dividend.

2. Premium rates proved somewhat redundant under the very exceptional conditions of the past two years, but the general rate is no more than adequate for normal industrial conditions. No general rate reduction can safely be made at the present time.

3. The Industrial Commission manifests every disposition to pay the full legal benefits upon all valid claims. There is no evidence of unfair compromises, "short changing," or disallowance of claims on merely technical grounds. But there are instances of excessive delay in adjusting claims, and the average interval between date of accident and the first payment thereon is too long. These delays are due in part to an inadequate appropriation and in part to over-formal procedural requirements.

4. The fund has been managed with extreme, even excessive economy. The actual net cost of the fund does not exceed $2\frac{1}{2}$ per cent of the average annual premiums over a five-year period. In part, this extremely low cost has been attained by unwise and unnecessary skimping of service.

Summary Conclusion of Mr. Dawson.

The outstanding result of this thorough investigation of the Ohio State insurance fund is to demonstrate that it is, and has at all times been, strong and solvent; that it has been conducted with economy unprecedented even in State funds the world over and at about one-twentieth the expense in insurance companies conducted for profit; that the State Industrial Commission has administered the Workmen's Compensation Act through this public agency with care and in a most unusually beneficial manner, so as to subserve the public purpose of relief where relief is due under the law; that the only operative defect, viz, tardy and over-formal handling of claims, will easily be removed by simplifying the procedure; and that, all told, the greatest and most successful demonstration in this country of the possibilities of the largest benefits at the lowest cost, from a workmen's compensation law, has been achieved by the Ohio State Industrial Commission and the management of the Ohio State insurance fund, as is conclusively shown by the examiner's report.

Text of Mr. Downey's Report.

The following is the complete report of Mr. Downey, except that the detailed explanations and statistical tables dealing with claim reserves have been eliminated:

Pursuant to your instructions, I have made an audit of the assets and liabilities of the Ohio State fund as of the close of business on March 1, 1919. The examination was primarily concerned with the financial condition of the fund and touched upon questions of administration only incidentally as they were brought to light in the detailed review of financial transactions.

The receipts, disbursements, and assets disclosed by the auditor's accounts were verified from the books of the treasurer of state, who is the custodian of the fund. The treasurer's balance was obtained for both March 1 and June 1, and receipts and disbursements between those dates verified, primarily as a check upon the items of "Premiums in course of collection" and "outstanding warrants" in the exhibit of assets and liabilities for March 1 (Table II). All claims on account of which there was any actual or potential liability against the fund as of March 1, 1919, were examined and valued in accordance with recognized actuarial principles. Your examiner is therefore in a position to state, with great confidence, that the reserves set up are more than adequate to carry all claims to maturity and that the surplus of \$3,682,471 disclosed in the subjoined exhibit is fully earned. It follows that the fund is abundantly solvent, that premium rates upon the whole have hitherto been maintained at an adequate level, and that the reserves set by the actuarial department in the past have proven sufficient to meet maturing obligations.

The Ohio State insurance fund commenced business as a competitive insurer under an elective compensation law on March 1, 1912. It became the exclusive carrier of compensation insurance in Ohio (except for self-insured employers) on January 1, 1914. This examination, therefore, covers an experience of seven years in all and 62 months' experience under the compulsory law. The growth of the fund during this period, as respects the insurance of private employers, is exhibited in Table III.

By the close of business on March 1, 1919, the fund had accumulated total assets of more than \$19,000,000, and a clear surplus over all liabilities of \$3,682,471. This surplus is equal to 29 per cent of total outstanding claims and puts the fund in a position of very great financial strength.

The Ohio State fund, measured by the actual volume of benefits insured, has now become the largest carrier of compensation insurance in the United States. One or two private insurance companies, it is true, had a larger total of premium income in 1918, but 40 cents out of every dollar collected by these companies is absorbed by overhead expenses, whereas the whole income of the Ohio fund is devoted exclusively to the payment of compensation claims. That the fund has attained this commanding position in volume of business and in financial strength is convincing proof of wise and conservative management. For, though the fund is noncompetitive, it could not have been maintained as such without widespread confidence on the part of employers and employees, and could not have attained its present eminently sound condition without pursuing a prudent and far-sighted policy in the matter of rates and reserves.

Income and Disbursements.

All income of the Ohio State insurance fund is derived from four sources:

- (a) Premiums from private employers insured in the fund.
- (b) Premiums from the State and its subdivisions for the insurance of public employees.
- (c) A tax upon employers who carry their own risk (self-insured employers) equal to 5 per cent of the premiums which such employers would pay if insured. Income from this source is specifically designated by law to maintain the perpetual solvency of the fund. A part of the premiums so derived has been used to meet catastrophe losses; the unexpended balance is converted into the catastrophe surplus.
- (d) Interest earnings upon investments and deposits. Since the fund is neither conducted for profit nor required to meet administration expenses out of premiums, investment earnings are very properly credited pro rata to the premium accounts of public and private insured employers and so serve directly to reduce premium rates.

Disbursements from the fund (apart from purely investment transactions and adjustment refund premiums to employers) are solely for the payment of compensation and medical claims. All administrative expenses, even to the cost of auditing pay rolls and collecting premiums, are defrayed from the general revenues of the State.

Table I exhibits the income and disbursements of the fund from March 1, 1912, to the close of business, March 1, 1919. It will be seen that private insured employers furnished 92 per cent, public employers 2.5 per cent, self-insurers 2 per cent, and investment earnings 3.5 per cent of total income. A remarkable feature of this exhibit is the extremely small proportion (barely 0.8 of 1 per cent of returned premiums) on "policies canceled or not taken."

Investment earnings will, of course, play an increasingly important rôle in the future history of the fund, owing to the gradual accumulation of reserves against outstanding claims. For the current year interest on bonds and bank deposits will run well beyond 5 per cent of total income. It should be mentioned in this connection that the treasurer of state keeps no account of accrued interest and that no credit for such accruals is taken on the subjoined statements. The amount of such accruals on March 1 may be conservatively estimated at \$100,000. The inclusion of this item would serve to increase the assets of the fund to that extent.

TABLE I.—*Income and disbursements, Mar. 1, 1912, to Mar. 1, 1919.*

INCOME.	
Premiums received:	
Private insured employers.....	\$32, 831, 461
Self-insurers.....	813, 290
State and counties.....	896, 961
	<hr/>
	\$34, 541, 712
Interest.....	1, 262, 529
Returned warrants.....	3, 508
	<hr/>
	1, 266, 037
Total receipts.....	<hr/>
	\$35, 807, 749
DISBURSEMENTS.	
Claim payments:	
Private insured employers..... ¹	18, 289, 024
State and counties.....	513, 227
	<hr/>
	18, 802, 251
Premium refunds on canceled policies:	
Private insured employers.....	292, 014
Self-insurers.....	7, 896
	<hr/>
	299, 910
Accrued interest on bonds purchased.....	110, 523
	<hr/>
Total disbursements.....	19, 212, 684
Cash balance.....	16, 595, 065
Outstanding warrants.....	255, 182
	<hr/>
Treasurer's balance.....	16, 850, 247

TABLE II.—*Assets and liabilities, Mar. 1, 1919.*

ASSETS.	
Bonds.....	\$10, 891, 601
Time deposits.....	5, 087, 000
Demand (checking) deposits.....	871, 646
	<hr/>
	\$16, 850, 247
Premiums in course of collection:	
Private insured employers.....	2, 256, 550
Self-insured employers.....	191, 746
State and counties.....	226, 902
	<hr/>
	2, 675, 198
Deduct premiums due over 90 days.....	96, 423
	<hr/>
	2, 578, 775
All assets.....	<hr/>
	19, 429, 022
LIABILITIES.	
Claim reserves:	
Private insured employers.....	12, 183, 011
State and counties.....	307, 524
	<hr/>
	12, 490, 535
Outstanding claim warrants ²	255, 182

¹ Includes all warrants issued to the close of business on Mar. 1, 1919.² These are warrants which had been issued in payment of claims before the close of business on Mar. 1, 1919, but had not been presented for payment at that time. This amount is included in claim payments in Table I and also in Table III, column 4.

TABLE II.—*Assets and Liabilities, Mar. 1, 1919—Concluded.*

Unearned premiums:

Private insured employers.....	\$2, 753, 835
Self-insured employers.....	101, 574
State and counties.....	145, 425
	<u>\$3, 000, 834</u>

All liabilities.....	\$15, 746, 551
Statutory catastrophe surplus.....	1, 052, 700
General surplus.....	2, 629, 771
	<u>3, 682, 471</u>

TABLE III.—PREMIUM AND LOSS EXHIBIT, MAR. 1, 1912, TO MAR. 1, 1919, PRIVATE INSURED EMPLOYERS ONLY.

Insurance period. 1	Earned premiums. 2	Cumulative premiums and losses.			Insurance period.		
		Incurred losses. 3	Losses paid. 4	Losses out- standing. 5	Earned premiums. 6	Incurred losses. 7	Loss ratio. 8
May 15, 1918, to Mar. 1, 1919..	\$33, 725, 345	\$30, 472, 035	\$18, 289, 024	\$12, 183, 011	\$10, 051, 509	\$8, 231, 034	81.9
May 15, 1917, to May 15, 1918..	\$23, 673, 836	22, 241, 001	13, 791, 523	8, 449, 478	9, 205, 025	8, 373, 199	91.0
May 15, 1916, to May 15, 1917..	14, 468, 811	13, 867, 802	8, 898, 401	4, 969, 401	6, 567, 543	6, 440, 075	98.1
May 15, 1915, to May 15, 1916..	7, 901, 268	7, 427, 727	4, 931, 693	2, 496, 034	3, 537, 364	3, 623, 238	102.4
Nov. 15, 1914, to May 15, 1915..	4, 363, 904	3, 804, 489	2, 621, 972	1, 182, 517	988, 811	1, 071, 205	108.3
Sept. 1, 1913, to Nov. 15, 1914..	3, 375, 093	2, 733, 284	1, 585, 571	1, 147, 713	2, 962, 723	2, 437, 255	82.3
Mar. 1, 1912, to Sept. 1, 1913..	412, 370	296, 029	137, 481	158, 548	412, 370	296, 029	71.8

¹ This amount includes \$1,229,704 investment earnings and \$555,143 catastrophe premium from self-insured employers. Against this latter amount were charged an equal volume of catastrophe losses.

² Includes all warrants issued to the close of business on Mar. 1, 1919.

³ A cash dividend or return of premiums in the amount of \$336,452 was distributed to insured employers in 1918. This amount is deducted from earned premiums in the above statement.

Assets and Liabilities.

The permanent investments of the fund consist almost exclusively of Ohio municipal bonds, including in that term the bonds of counties, cities, townships, and school districts. A statute of the State requires that all such issues shall be offered to the fund at par and shall not be placed upon the open market until declined by the fund. A considerable proportion of the securities so acquired are issues of small taxing bodies for which no broad market exists and which could not be disposed of on short notice without some loss. There is, of course, little probability that the fund will ever be obliged to sell its holdings on short notice and little reason to doubt the ultimate security of any of these bonds. Taken as a whole, indeed, the bonds held by the fund are exceptionally high grade. Nevertheless caution should be exercised to avoid the accumulation of an undue proportion of the securities of small taxing bodies.

Bank deposits are of two classes: Time deposits (inactive account), and demand deposits, subject to check. Both classes of deposits are secured by surety bonds or deposit of securities. Time deposits are allocated upon open bids and bear interest at 4, 4½, and even 5 per cent. Demand deposits also bear interest upon quarterly balances. From 25 to 30 per cent of the total deposits are in small country banks.

The proportion of bank deposits to bond holdings was unusually large upon March 1, owing to the very heavy premium collections during the month of February. By June 1, the bond holdings had been increased to \$14,418,850 and the bank accounts decreased to \$4,532,162. Further large purchases of bonds have been made since that date.

Premiums in course of collection on March 1 totaled \$2,675,198, of which \$9,423 were charged off as having been due over 90 days. The very large amount of outstanding premiums on March 1 is accounted for by the great concentration of renewals in January and February. It is the practice of the fund to include in one bill premium adjustments on the expired policy and advance premiums on the renewal policy. The concentration or renewals in the early months of the year produces inevitable delays in premium adjustments and consequently also in the collection of advance premiums. By June 1, the amount of premiums in course of collection had been reduced to \$456,154, of which \$99,014 had been due more than 90 days. This showing evinces great promptness in premium collections. The loss of the fund on uncollectible premiums is extremely small—less than three-tenths of 1 per cent.

The liabilities of the fund consist solely in claim reserves and unearned premiums. Unearned premiums in the subjoined exhibit were totaled from individual policy accounts. The ratio of unearned premiums to annual premium income is exceptionally low because advance payments are made for six months only. The subject of claim reserves is treated at large in the third section of this report.

Surplus.

The examination discloses a total surplus on March 1 of \$3,682,471. Of this amount \$1,052,700 is set aside to meet possible catastrophic losses. This leaves \$2,629,771 in the general surplus account.

To the catastrophe surplus are credited all premiums paid by self-insurers and 5 per cent of other premiums. Against the sum so derived are charged all catastrophic losses as below defined. The unexpended balance constitutes the catastrophe surplus. The definition of a catastrophe varies with the classification rate, being two or more deaths from a single accident for rates of \$2 and under, three or more deaths for rates from \$2 to \$4, four or more deaths for rates from \$4 to \$6, and five or more deaths for rates over \$6. A novel feature of the definition is that a permanent total disability involving a calculated cost of \$12,000 or more constitutes a catastrophe. This procedure lessens the shock of severe losses in individual classifications, while it leaves a comfortable annual margin out of which to accumulate a catastrophe surplus. In the ordinary course of experience the present practice will provide sufficient funds to cover any probable catastrophic loss. Accumulation should continue at the present rate until the catastrophe surplus reaches a total of not less than \$2,000,000.

A competing insurance carrier ought, in mere business prudence, to have a large surplus, ranging as high as at least 50 per cent of the annual premium income, where the volume of premiums is small or not well distributed. The Ohio State fund is noncompetitive. It is in no danger of a rate war and it has a sufficient volume of statistical experience for sound rate making. The fund need not therefore maintain anything like so great a surplus as a competitive insurer would require. To the fund, indeed, the main function of a general surplus is to meet fluctuations in loss experience. Accident cost in the same industries varies year by year from causes which can not be foreseen—more especially from the effects of business depression and prosperity. Premium rates which are adequate on the average of a five-year period will be excessive in some years and deficient in others. But it is extremely undesirable that rates should fluctuate with every fluctuation in loss experience. Stability of rates from a business standpoint is almost as great a desideratum as equity. These considerations would require the fund to maintain a sufficient fluctuation surplus to tide over a lean year without the necessity of increasing rates. At least \$1,000,000 should be held for this purpose. The surplus at present in hand is more than sufficient to meet reasonable requirements. From \$1,000,000 to \$1,500,000 can safely be distributed without in any manner jeopardizing the stability of the fund.

Claim Reserves.

All outstanding claims were individually valued in the light of the latest information obtainable at the time of examination. At least three months' development from the date of accident was obtained on every case. Great care was taken to include all claims for which there was any actual or potential liability against the fund on March 1, 1919. The classification of claims and the amount reserved for each class are shown in Table IV.¹

TABLE IV.—CLAIM RESERVE EXHIBIT ON MAR. 1, 1919, PRIVATE INSURED EMPLOYERS ONLY.

Severity of injury.	Number of claims.	Average cost.	Incurred cost.		
			Total.	Paid to Mar. 1, 1919.	Outstanding Mar. 1, 1919.
1	2	3	4	5	6
All accidents.....	6,640	.....	\$17,144,670	\$4,961,659	\$12,183,011
Deaths.....	2,507	\$2,902	7,276,505	3,291,305	3,985,200
Permanent total disabilities.....	230	10,250	2,357,471	373,786	1,983,685
Specific permanent.....	1,220	1,018	1,241,422	464,512	776,910
Permanent partial impairment ¹	359	4,075	1,462,815	253,502	1,209,313
Indeterminate disabilities ²	954	3,260	3,109,871	323,372	2,786,499
Temporary disabilities ³.....	.....	.....	522,289	255,182	267,107
Medical.....	.....	.....	379,297	.....	379,297
Unreported claims ⁴	1,200	.....	240,000	.....	240,000
Concealed impairments ⁵	60	3,750	225,000	.....	225,000
Court appeals ⁶	110	3,000	330,000	.....	330,000
Deaths, with dependents.....	1,906	3,219	6,135,376	3,193,676	2,941,700
Deaths, without dependents.....	213	187	39,882	39,882	.....
Deaths, dependency doubtful.....	388	2,838	1,101,247	57,747	1,043,500
Loss of arm.....	57	2,236	127,464	41,929	85,535
Loss of hand.....	100	1,650	164,987	58,909	106,078
Loss of leg.....	36	1,786	64,290	23,965	40,325
Loss of foot.....	48	1,442	69,194	23,855	45,339
Loss of eye.....	334	1,139	380,482	160,968	219,514
Loss of fingers and toes.....	645	674	435,006	154,886	280,120

¹ Of the 359 impairment cases, 278 are provisionally closed, but may be reopened upon proof of an impairment of earnings.

² Of the 954 indeterminate disabilities, 773 are on account of accidents which occurred in 1918 and 1919. Of these, 260 were pending adjudication on June 1, 1919.

³ Column 6 on this line shows the amount paid after Mar. 1, 1919, on cases originating on or before Mar. 1, and closed on or before June 1. Column 5 on this line is the amount of warrants issued on or before Mar. 1 and cashed subsequent to Mar. 1.

⁴ This reserve is to provide for accidents which occurred before Mar. 1, but had not been reported up to June 1. The number and amount are estimated from actual experience of the fund in past years.

⁵ This reserve is to provide for the deficiency in impairment cases during 1918, as compared with previous experience of the fund.

⁶ Appeals from commission's decision, denying compensation from the fund. Reserve is the full amount claimed in each case, plus a loading of \$800 per case for court costs.

A convenient test of the adequacy of the reserves set up in Table IV for indeterminate claims is afforded by the Rubinow Standard Accident Table. This table is a frequency distribution of industrial accidents by severity of injury, compiled from European experience by a very competent statistician, Dr. I. M. Rubinow. The essential feature of this Standard Accident Table, for the present purpose, is the proportion of permanent disabilities to deaths. The proportion indicated by the Rubinow table has rarely been equaled in American experience and is unlikely to be equaled in Ohio experience. The Rubinow table was mainly derived from manufacturing industries, whereas a large part of the deaths chargeable to the Ohio State fund occurred in coal mining and construction work—industries which have an unusually low ratio of dismemberments to deaths. Yet if we assume that the full Rubinow expectancy

¹ The detailed explanations relative to each of the several claim reserve items contained in the report have been eliminated from this summary.

of permanent disabilities will ultimately be developed, the values carried in Table IV for indeterminates and concealed impairments will exceed the deficiency indicated in the Rubinow table by nearly \$500,000. This fact, in itself, constitutes an extremely rigorous test of the adequacy of the fund's reserves.

In short, there can be little doubt that the reserves set up in this examination are somewhat more than sufficient to carry all claims to maturity. It was your examiner's aim, in fact, to allow a reasonable margin of safety. While excessive redundancy in reserves is undesirable, the opposite error is a positive menace. Any excess that ultimately develops will be returned to subscribers in the form of a cash distribution or in reduced rates.

The revaluation of outstanding claims which originated prior to May 15, 1918, indicates that the reserves set up at that date by the actuarial department of the fund were fully sufficient to cover the liabilities on these claims as now ascertained. This fact goes to say that the present actuary of the fund is not likely to err on the side of inadequacy in computing reserves.

Rate Level.

Table III affords a means of testing the adequacy of rates throughout the history of the fund. By comparison of columns 6 and 7, in this table, it will be seen that the rates were somewhat deficient during the two years, May 15, 1914, to May 15, 1916, and barely adequate for the year ended May 15, 1917, though it will be noted by reference to the cumulative premiums and losses for these respective years, that the cumulative earned premiums exceeded the cumulative losses. At the close of this period of scant rates, the total surplus of the fund amounted to \$916,887, and the nonstatutory surplus to \$292,037. During this period, the fund continued to build up its catastrophe surplus, mainly from the contributions of self-insured employers, but was gradually depleting the general surplus which it had accumulated in the early years of high rates. The tide began to turn in the spring of 1917, since which date most of the present surplus of the fund has accrued.

This rate history closely parallels that of the private insurance companies. At the inception of the workmen's compensation in the United States, there were no reliable data for rate making. In the absence of sufficient knowledge, underwriters naturally guessed high. When the reports of premiums and losses began to accumulate, a large apparent profit developed, whereupon sharp and general rate reductions were forthwith made under the pressure of competition. Soon it was found that the outstanding liabilities on immature claims had been greatly underestimated. At the same time, a period of general industrial depression reacted adversely upon loss experience. By the end of 1916, rates were found to be seriously inadequate and were sharply increased throughout the country. Then came the era of war expansion. Pay rolls were enormously inflated, premiums grew by leaps and bounds, and there was no corresponding increase in compensation cost.

The Ohio State fund has been more conservative in rate changes than the private companies and has experienced less violent fluctuations in loss ratios. Within a narrower range, however, it has run the same gamut of excessive and deficient rates.

Every carrier of compensation insurance—stock, mutual, and State fund—has been severely criticized for the now manifestly redundant rates of 1918. Most of this criticism is misapplied. Underwriters did not, and could not, in 1917, foresee the effects of war time activities on compensation premiums and losses. At that time it was reasonably expected that the great war would continue well into 1919, that an ever larger proportion of vigorous young men would be withdrawn from industry to be replaced by women, children, old men and the physically unfit, and that, in consequence, the number and severity of industrial accidents would show a marked increase. Happily the war ended before these expectations had been realized.

Meanwhile the combined effect of low maximum compensation and abnormally high wages had pulled down the ratio of compensation cost to pay rolls by as much as 20 or 25 per cent. The Ohio law, e. g., promises two-thirds of wages during disability, but not more than \$12 a week. With the high wage levels of 1918, the nominal two-thirds fell to one-half for the common laborer and to one-third or less for the skilled mechanics. When compensation bore no reasonable relation either to loss of earnings or to the ever-mounting cost of the necessities of life, injured workmen were only too eager to return to work, even though physically unfit. When labor was at a premium, when even the aged, the lame, and the halt were eagerly welcomed, the employer was only too glad to keep a partially disabled man upon his pay roll. There resulted a great falling off in the average duration of temporary disabilities and a great reduction in the number of cases compensated for impairment of earnings. At the same time many men who were permanently partially disabled and who had long been upon the pension list of the fund—men with withered arms, ankylosed ankles, stiff knees, or maimed hands—found temporary employment at wages equal to their earnings at the date of injury and so passed off of the pension list.

For these reasons the pure premium experience of 1918 would be an utterly unsafe guide to premium rates in the postwar period. Even for that year the ultimate cost of accidents is by no means yet ascertained; many permanent partial disabilities arising out of accidents which occurred in 1918 will only come to light as the lessened demand for labor leads to a weeding out of industrial cripples. Hence any sweeping rate reduction upon the basis of 1918 experience would be most unwise. Experience up to the spring of 1917 clearly indicates that the general rate level of the Ohio fund is by no means excessive for normal times. Rates for individual classifications ought, of course, to be adjusted wherever necessary, but the rate level as a whole should be maintained. It is far safer to return the accrued surplus to subscribers in the form of a cash distribution than to rely upon that surplus to tide over a period of inadequate rates.

No insurance carrier was ever yet embarrassed by an accumulated surplus, whereas inadequate rates spell ultimate inability to meet accrued obligations.

Claim Settlements.

The two great desiderata in the handling of compensation claims are prompt and full payments of the benefits provided by law. Workmen's compensation acts are placed upon the statute books for the relief of injured workmen and their dependents. Such legislation being humanitarian in purpose, public policy requires that the law shall be liberally construed and reasonable doubt resolved in favor of the claimant. Any attempt to withhold compensation on mere technicalities, to cut off payment before disability has ceased, to harass claimants with procedural delays or to coerce them into accepting less than the full legal benefits, is contrary to the whole spirit and intent of workmen's compensation. But it is not enough that every equitable claim shall ultimately be paid in full. Delay is emphatically a denial of justice. Few workmen have such surplus of income that they can afford to wait weeks or months for the commencement of compensation. When the weekly pay check stops destitution is never far away. Promptness in bringing relief to the sufferers is of the very essence of any sound scheme of social insurance.

It was not possible to make any thorough or conclusive test of the record of the Ohio State fund in the matter of claim settlement within the time limits of an examination devoted primarily to the valuation of assets and liabilities. For the purposes of such an inquiry it would be needful to read the testimony and the findings of fact in many hundreds of cases, to trace a large number of claims from first report to final disposition, to attend numerous hearings, to observe the actual work of the claims division through a considerable period and, not least, to make a field survey.

All that could be attempted in the present examination was an analysis of open claims—including appeals from the commission's decisions—incident to the determination of liability thereon. Such an analysis, however, while not conclusive, will throw much light upon the question at issue.

(1) Careful scrutiny of several thousand claim records with the foregoing criteria in view failed to disclose any evidence of the denial of compensation by the Ohio fund on overstrained or technical grounds. On the contrary, there was a manifest intention on the part of the Industrial Commission, which administers the fund, not indeed to transcend the limits of the law, but to deal fairly and even liberally with claimants. This spirit is perhaps best shown in the treatment of permanent partial disabilities not covered by the specific indemnity scale.

Specific indemnities, which form so distinctive a feature of American compensation acts, are almost always paid in full. The case is quite otherwise with that large class of permanent disabilities due to impairment, as distinct from total loss, of members. These disabilities are compensable, as a rule, on the basis of loss of earnings. But impairment of earnings is often difficult to establish and still more difficult for an administrative board to follow up in those jurisdictions where claim settlement rests with the employer or his insurer. In these jurisdictions, accordingly, the number of such injuries compensated for the loss of earnings bears no reasonable proportion to the number that actually occurs. The experience reported to the Pennsylvania Insurance Department, e. g., reveals barely one case of impairment to twelve cases of loss of member. Experience in the State of New York is not widely different. The Ohio fund, per contra, has paid compensation in a larger number of cases, and in greater aggregate amount, for impairments of hand, arm, leg, and foot than for outright loss of these members.

The like spirit is manifested in the medical follow-up of serious injuries. In almost every case of long-continued disability the claim folder contained a recent detailed medical report. Medical examination had been set in several hundred cases wherein compensation had been suspended before the last report showed earnings equal to the wages of the injured at the date of injury. The practice, indeed, is to reexamine every case of severe injury twice yearly until disability has wholly ceased or has been pronounced incurable. In a large proportion of these cases, there is a record of expensive operative procedure and prolonged hospital care.

Evidence to the same effect is afforded by the small number of claims for compensation rejected by the commission and the small proportion of appeals from decisions of the commission denying compensation. During the 12 months ended March 1, 1919, compensation was awarded for more than 50,000 accidents and disallowed on only 978 claims.¹ On June 1, 1919, only 110 court appeals were pending—the majority whereof were on account of accidents that occurred more than a year before. Stated in percentages, the commission disallows two claims in every hundred and the disappointed claimants appeal from 5 per cent of such decisions.

From the standpoint of full payment, then, this examination discloses no ground of criticism. The Industrial Commission, in its final disposition of claims, appears to be giving full effect to the compensation act.

(2) With respect to promptness of claim payment the record of the Ohio fund is much less favorable. The average interval between accident occurrence and the first compensation payment is too long and the instances of serious delays are far too numerous. By reference to Table V it will be seen that on the third Monday in

¹ Compensation may be denied on the ground that the alleged injury does not cause disability, that the injury was not the result of accident, that the accident did not occur in the course of employment or—in the event of death—that the claimant was not dependent upon the deceased. Appeal may be taken to the court of common pleas only from a decision denying compensation altogether. Trial in appeal cases is by jury.

June, 1919, there were pending 6,000 compensation claims, of which more than 3,500 were on account of accident which occurred before June 1. To grasp the full significance of this situation it must be understood that the payment of compensation does not begin until the Industrial Commission has made an award to that effect. The exhibit shows, then, that there were 3,527 cases in which no compensation had been paid more than three weeks after the date of the accident, 1,564 cases with no compensation more than seven weeks after the accident, and 371 cases in which compensation had not begun more than 12 weeks after the accident. Not all of these cases, by any means, are compensable. Every accident notice is treated by the Ohio fund as a pending claim, even though no application is filed, for a period of 90 days after accident occurrence. The experience of the fund has shown that about one-twelfth of the accidents reported to the fund cause no disability, and give rise to no claims for either compensation or medical aid.

TABLE V.—CLAIMS PENDING FIRST ADJUDICATION¹ JUNE 23, 1919, BY MONTH OF ACCIDENT OCCURRENCE.

Month of accident occurrence.	Number of claims pending.	Per cent of pending claims.	Per cent of compensable accidents for same period. ²
1	2	3	4
All.....	6,003	100.0	7.0
1919.....	5,929	98.8	20.0
June.....	2,476	41.3	60.0
May ³	1,963	32.7	40.0
April.....	1,193	19.9	25.0
March.....	215	3.6	5.0
February.....	62	1.0	1.5
January.....	20	.3	.5
1918.....	74	1.2	.3
December.....	18	.3	.....
November.....	19	.3	.....
October.....	13	.2	.....
September.....	9	.15	.....
August.....	11	.2	.....
July.....	4	.....	.....

¹ Actual payment of compensation does not begin until the Industrial Commission has rendered an award to that effect. The award on first adjudication is commonly a direction to pay compensation until disability ceases or a further order is taken. "Pending claims," under this procedure, are claims on which no compensation has been paid.

² The percentages in column 4 are approximations only.

³ Most of these pending claims are on account of accidents which occurred in the latter part of the month.

The implications of this exhibit of pending claims are confirmed by a record of 167 compensable claims originating before the first of February and still open on June 1, on which no payment has been made down to March 1. Of these 167 accidents 58 occurred in January, 1919, 45 in December, 1918, 25 in November, 9 in October, 6 in September, and 24 in still earlier months.

The "waiting period" under the Ohio law is seven days, so that the first compensation payment ought normally to be made, not only *for* but *in* the second week of disability. Making all due allowances for delayed notices, insufficient information, questionable claims, and the like, the proportion of claimants awaiting first payment at the end of 3 weeks should not exceed 10 per cent. That 40 per cent of the compensable accidents which occurred in May and 25 per cent of those that occurred in April should still be pending first adjudication, and with no compensation paid, on the 23d of June, bespeaks unreasonable delay in the initial steps of compensation payment.

This unfortunate situation is due in large part to totally inadequate appropriation. The claims division has a total of 93 full-time employees, including 7 field investigators, to handle an annual volume of over 150,000 claims. The salaries are

miserably insufficient to attract and retain capable men for the responsible positions. The number of field agents is wholly inadequate to make prompt investigations of disputable claims. The whole expenses of claim adjustment, for the fund and for self-insurers, amount to less than 1 per cent of pure premiums. To anyone conversant with the subject, it needs no argument to show that compensation claims can not be promptly or efficiently handled for any such cost.

In part, however, procrastination in initial payments is directly chargeable to ritualistic procedure. The commission requires, as the basis of an award, a formal application from the claimant, supported by the employer's report of accident and by a medical report. Failure to receive any one of these documents means delay in beginning compensation. Application from the claimant is required upon purely legalistic grounds. An injured workman, by an unfortunate provision of law, has a nominal right of election, after injury, to take compensation or bring suit against his employer on the ground that his injury was caused by the employer's failure to comply with safety laws. His application to the fund constitutes his election and so is necessary to perfect a legally valid claim. But the election to bring suit is so rare that for all practical purposes such a contingency might properly be ignored. In most cases, indeed, the application is a matter of form, the blank being filled out and the applicant's signature secured by the employer himself. But the employer is sometimes averse to the payment of compensation and the injured man is often ignorant of his rights or incapacitated by his injury from filing a claim. The medical report, again, is required to establish the fact of disability. This requirement is the more reasonable in that practically every compensable accident requires medical attention. Medical men, however, are notoriously negligent in the making of reports. To withhold compensation for weeks or months pending the report of the attending physician is to inflict unmerited hardship, not upon the delinquent doctor, but upon his hapless patient. Numerous instances were found of such delay in cases where no medical report was necessary to establish the fact of disability. It needs no expert testimony to prove that a man with a broken leg will be disabled for several months or that a coal miner "caught by a fall of slate" has sustained a compensable injury.

The remedy is neither far to seek nor difficult to apply. The employer's notice of accident is, or can readily be made, *prima facie* evidence of a compensable accident. The employer is required by law to report the accident within seven days; that is, at a time when it is already known whether disability continued beyond the waiting period. Every other fact essential to establish a claim for compensation can ordinarily be stated in the same report. A proper system of supplementary reports will establish the continuance or termination of disability.

For another class of delayed payments—the suspension of a permanent disability pension pending reexamination—there is even less excuse. The system of medical follow-up in these cases is thoroughly commendable. It results from this system that permanent total disabilities, e. g., are kept under observation for a term of years. Until very recently it was the practice of the commission, after each periodic examination, to award temporary total compensation up to a fixed date, with re-examination before that time. The number of examiners being very limited, it frequently happened that the fixed number of months expired before reexamination could be made; whereupon compensation was automatically suspended. One such case of self-evident permanent total disability—Claim No. 73179, fractured skull resulting in paralysis—exhibited a record of 11 such suspensions within 4 years totaling 51 weeks. After each hiatus, the claimant was replaced upon the pension roll, with back pay from the date of suspension. This particular evil has been corrected by the simple expedient of making the award in such cases run "until further order of the commission."

The class of permanent impairments, not amounting to dismemberment or to total disability, might properly be handled in somewhat similar fashion. These disabilities are compensated at two-thirds of the "impairment of earning capacity during the continuance thereof." The commission required, as proof of such impairment, a monthly statement of wages, certified by the employer. By reason of this practice partial disability benefits partake of the character of unemployment insurance. When the partially disabled workman is out of a job, he frequently draws the maximum compensation; when he secures employment at good wages, his compensation ceases altogether. Compensation thus fluctuates with the labor market; four or five changes in the weekly rate, up as well as down, may be made in the course of a twelve-month, all the while that the workmen's physical condition and consequently his actual "impairment of earning capacity" remain unchanged.

This system of in and out adds enormously to the burden of claim adjustment and claim payment, at the same time that it entails innumerable delays and suspensions of compensation. In scores of impairment folders the last entry reads: "No wage statement for March," April, or May, as the case may be. Most often the employer has simply neglected to file the statement; when he at length does so, compensation is paid for the past several months. The burden of correspondence, of bookkeeping, and of rehearings in cases of unemployment may readily be conceived.

Undoubtedly the commission's rule follows the letter of the law: Average wages at the date of accident is the basis of compensation and diminution of wages is the measure of impairment. But it may be doubted whether such a rule is either expedient or judicially inevitable. Immediate loss of earnings is not the sole nor the best measure of a permanent impairment of earning capacity. In most of the cases under consideration the claimant has a permanent physical disability—commonly a permanent injury to one of the long bones or to a crucially important bony articulation. There is no chance that his condition will ever improve. Looking forward to his prospective career as a wage earner, with due regard to the effect of his physical handicap upon his chances of employment, it is possible to determine with approximate accuracy the actual impairment of earning capacity and to fix the rate of compensation once for all upon that basis. It is probable that this method would do greater equity upon the whole than the present rule; it is certain that it would be far simpler to administer, would involve no increase in aggregate payments, and would be better in every respect for the injured workman. The way to encourage rehabilitation is not to penalize it. So long as compensation varies with every variation in current earnings, self-interest, uncertainty, and the whole play of subconscious influences deter the workman from doing his best. Once his compensation status is definitely fixed, he has every incentive to earn as much as he can.

The procedural changes herein suggested appear to be well within the interpretive and rule-making powers of the Industrial Commission. Their adoption would go far to remove the vexatious delays and suspensions which are the only ground of serious criticism against the otherwise excellent administration of compensation benefits.

For the rest, there is crying need of more and better paid deputies, referees, medical examiners, and field investigators to establish prompt touch with beneficiaries and facilitate the hearing of claims. It is not enough that every claim actually filed shall receive prompt attention. Every notification of a fatal or serious injury should be followed up; if no claim is filed within a reasonable time, investigation should be made and the claim, if liability is found to exist, completed. The whole purpose of the fund is to pay benefits where benefits are due, and this purpose cannot be achieved by a purely mail-order system nor by throwing the initiative exclusively upon the injured workman and his dependents. The common-law theory that every man is acquainted with his rights and able to maintain them is as little applicable to workman's compensation as the fellow-servant rule.

In all fairness, it should be added that the record of the Ohio State fund, even in respect to promptness of claim settlement, will compare favorably with the record of any other insurance carrier. The criticisms herein made do not imply that the fund is more remiss in this matter than other insurance carriers, but only that it is less prompt than can fairly be expected of a fund conducted by the State for the sole and express purpose of securing the prompt and full payment of compensation benefits.

Premium Adjustment.

Policies of the Ohio State fund are issued in the ordinary way upon payment of an advance premium calculated from the employer's estimate of pay roll. All premiums are by law adjusted semiannually upon the actual pay roll. The practice of the fund is to make preliminary adjustments upon the employer's sworn statement of pay roll, subject to subsequent audit. Twenty-seven traveling auditors are employed for the purpose, and all risks of any magnitude are audited at least annually. Renewals being, with few exceptions, automatic, the employer's statement of pay roll for the past six months is included on the same blank with his estimate for the ensuing half-yearly period, and the past premium adjustment is incorporated in the bill for the renewal premium. An advance estimate of pay roll less than the actual pay roll for the last insurance period is not accepted unless the reasonableness of such estimate is clearly established. Failure to pay the renewal and adjustment premium within 10 days after billing automatically cancels the policy and the employer's name is thereupon certified to the attorney general as a delinquent.

A unique system of merit rating is applied to all risks insured in the fund. For risks other than contractors this plan is one of charges only. Normal losses are taken at 60 per cent of manual rates. In computing the losses of an industrial risk, a death is taken at an amount equal to the normal losses in the same classification upon \$100,000 of pay roll, and a permanent total disability is taken at one and one-half deaths. No account is taken of any catastrophe. If the losses of the risk as so computed do not exceed the normal the manual rate is applied. If the risk losses exceed 60 per cent of manual premiums, a charge of 3 per cent of manual rate is made for every 10 per cent of such excess, subject to a maximum of 30 per cent. The rating is prospective—that is, the experience charge, if any, is calculated and applied at the beginning of each half-yearly insurance term. The entire experience of the risk while insured with the fund is comprised in the experience-rate calculation. A system of credits only, similar in principle to the foregoing, is applied to contracting risks.

The total charges developed by this plan, during the last insurance year, amounted to approximately 4½ per cent of premiums on industrial risks, and the total credits to approximately 3 per cent of premiums upon contractors' risks. The net balance of charges was 3½ per cent of total earned premiums.

This highly ingenious plan was devised in its entirety by the present actuary of the fund. Its conspicuous merits are simplicity and universality of application and the avoidance of extreme deviations from classification rate. The outstanding defects are the excessive penalty for a single death or permanent disability in the experience of a small employer, and the inability of a large employer to obtain a rate to which his individual experience, as contradistinguished from that of his classification, may fairly entitle him. Changes in the experience rating plan, effective July 1, 1919, will meet the foregoing criticisms in part.

The combination of semiannual premium adjustment with the experience rating of thousands of risks entails a prodigious burden of accounting. During the past year the actuarial division had fifteen employees continuously engaged in the work of compiling and verifying the experience record of individual risks from the inception of the fund. With all this effort, there has been delay in the making of premium adjustments

each January and July, when the great bulk of the fund's business comes up for renewal. The excellent mechanical equipment at present possessed by the actuarial department has largely overcome this difficulty. To make matters worse, the law requires an annual revision of classification rates as of July 1. There are, of course, compensating advantages in the system of semiannual premium adjustments. In a period of rapid industrial expansion or contraction the fund does not have to wait 18 months—as the private insurance companies must—to ascertain the trend of premiums and losses.

The fund, until the last few periods, has never established a definite "year of account." Statements have been compiled for various "insurance periods," running to September 1, May 15, and March 1. (See Table III.) Each of these periods is awkward and their variety makes it difficult to compare the experience of the fund from period to period. May 15 has been used for the last several years, except as applied to 1919, when it was set back to March 1 in order to give an even seven-year period for the actuarial audit and also to allow sufficient time for the completion of both the actuarial audit and revised rate computations. While it is true that the use of May 15 has given the actuarial department a greater volume of experience upon which to compute its July 1 rates, at the same time, the large experience now developed by the fund makes this late date no longer necessary. The year of policy issuance, used by most casualty insurance companies, is disadvantageous in itself and inapplicable to the fund. The calendar year ending December 31 would probably be most convenient. The calendar year of account would coincide with the policy year for the bulk of the business. Premiums and losses for the year would be automatically ascertained in the course of individual policy adjustments. Three months after December 31 could be allowed for maturity of claims and still permit the compilation of classification experience in ample time for the annual rate revision. The work of classification rate making would in fact be thrown by this plan into the relatively slack months between March and July.

Administration Expenses.

The Industrial Commission of Ohio administers the Workmen's Compensation Act, the Factories and Workshops Act, the Mine Law, and the Woman and Child Labor Laws, conducts the free employment offices, inspects steam boilers, licenses stationary engineers, and censors the movies. The management of the State fund is incidental to the administration of the Industrial Commission Act. To ascertain the administrative cost of the fund, therefore, it is necessary to make a functional analysis of the commission's accounts. Such an analysis for the fiscal year ended June 30, 1918, is presented in Table VI.

TABLE VI.—EXPENSES OF THE INDUSTRIAL COMMISSION FOR THE YEAR ENDED JUNE 30, 1918.

Department.	All expenses.	Salaries.	Fees.	Rent, insurance, light and heat.	Equipment and supplies.	Postage, express, telephone and telegrams.	Traveling expenses.	All other expenses.
1	2	3	4	5	6	7	8	9
All departments.....	\$608,254	\$458,727	\$2,710	\$31,349	\$13,260	\$37,006	\$61,521	\$3,681
Executive.....	61,688	39,447	52	13,642	1,640	5,485	1,372	50
Compensation.....	279,596	215,447	2,264	6,647	6,869	25,660	22,689	20
Statistics and information....	53,002	43,813	243	1,670	1,236	3,287	1,813	940
Workshops and factories.....	92,463	68,609	.....	2,532	534	78	18,059	2,651
Mining.....	43,861	32,073	148	1,855	900	433	8,452	.....
Boiler inspection.....	33,669	25,084	.....	1,813	533	4	6,235	.....
Engineers' licenses.....	27,316	21,500	3	969	280	1,697	2,867	.....
Moving picture censorship....	16,659	12,754	.....	2,221	1,268	362	34	20
Compensation department:								
All divisions.....	279,596	215,447	2,264	6,647	6,869	25,660	22,689	20
Auditing division.....	95,775	73,382	.....	2,510	2,594	5,700	11,589	.....
Actuarial division.....	45,233	38,917	.....	1,237	1,279	2,000	1,800	.....
Claim division.....	138,588	103,148	2,264	2,900	2,996	17,960	9,300	20

The executive department comprises the commissioners, secretary, assistant secretary, bookkeepers, and certain clerks and stenographers. Six examiners of compensation claims, charged to the executive department, were for the purpose of this analysis transferred to the compensation department. Postage, on the bookkeeper's accounts, is charged to the executive department. Of the amount so charged \$20,000 was transferred to the compensation department.

In the expense analysis of the compensation department, the items of rent and equipment were prorated by number of employees and the item of traveling expenses was allocated among the several divisions in accordance with their known functions.

The actuarial divisions of the compensation department has complete charge of rate making, experience rating, underwriting of risks, compilation of statistical information and the computation of reserves. The chief actuary thus combines, in many respects, the functions of actuary, underwriter, and manager of the fund. The functions of the auditing and claim divisions are sufficiently expressed in their titles.

The department of statistics and information, it should be noted, has nothing to do with accident or compensation statistics.

It will be seen that the entire cost of the compensation department (including all expenses of the fund) was \$279,596. Adding a fair proportion of the executive or overhead cost, the total was somewhat short of \$300,000. For the fiscal year ended June 30, 1919, the corresponding total was in the neighborhood of \$320,000.

If, then, the whole cost of the compensation department were fairly chargeable to the fund, the "expense ratio" for the current fiscal year would be somewhat less than 3 per cent, and for the last preceding year less than 4 per cent, of earned premiums. Computed in like manner, the expense ratio of the fund from its inception to March 1, 1919, is less than 5 per cent. This extraordinary showing bespeaks extremely economical, not to say niggardly, management.

In point of fact, the expenses fairly chargeable to the fund are considerably less than even this showing would imply. The compensation department of the Industrial Commission handles not only claims against the fund, but claims against self-insurers—a group which comprises some 35 per cent of the accident exposure in the State. It must be remembered, moreover, that the adjudication of compensation claims is a function which would devolve upon the State irrespective of the maintenance of a State insurance fund. To judge from the experience of other jurisdictions, the supervision of claim settlement by private insurance carriers costs quite as much as the direct settlement of claims through the medium of a State fund. Were the fund wiped out of existence, the charge upon the public treasury would be decreased, at most, by the cost of the auditing and actuarial divisions. The actual net cost of the fund, over and above the cost of administering the compensation act without State insurance, does not exceed \$150,000 per annum—about 2½ per cent of average annual premiums over a five-year period. This compares with an expense ratio of 40 per cent of premiums on the part of private insurance companies.

Economical management, however, is not simply a matter of expense incurred; account must be taken as well of the service performed. Viewed from this broader standpoint, it is past question that the expenses of the Ohio fund have been kept below the level of reasonable efficiency. Bona fide economies in the elimination of selling costs and of competitive duplication account for much the greater part of the saving above referred to; but there have been also some fictitious savings at the sacrifice of legitimate and necessary services. Some of the functions properly pertaining to compensation insurance are neglected altogether; others are inadequately performed.

The need of more liberal support is especially urgent in the claims division. Private insurance companies spend 10 per cent of compensation benefits upon claim adjustment; the Ohio fund is compelled to get along with 1. The claim expenses of private insurers, indeed, cover much competitive waste. The Ohio fund has no need to maintain a dozen branch offices in Cincinnati nor to send 12 adjusters to Orrville to investigate as many claims. But it does need at least double the present number of referees, medical examiners, and field investigators,¹ in order to carry compensation with reasonable promptness to injured workmen and their dependents. It needs, moreover, to pay far higher salaries to the men who are primarily responsible for the determination of claims, and to vest them with larger discretion. It is physically impossible that the commission should actually pass upon more than a minute fraction of compensation claims. In the vast majority of cases, the decision of the claim examiners in the office or of the claim investigator in the field, of the medical examiner, the referee, or at most the director of claims, will become in effect the decision of the commission. If these men, in their several ascending grades, possess the requisite training and experience and are vested with appropriate discretion, the procedure will take on a character of flexibility and dispatch. If, on the other hand, these responsible subordinates are paid the salaries of clerks, they are likely to be of clerical grade; if of clerical grade they can not safely be intrusted with more than clerical discretion; which comes to saying that the determination of claimants' rights, in the vast majority of cases, will be made by rule of thumb.

If the claims division is inadequately supported, the safety division is nonexistent. The Industrial Commission, of course, enforces safety laws in factories and mines; but law enforcement is quite distinct from the safety work customarily carried on by compensation insurance. The merit rating plan already described and its accident prevention laboratory constitute the immediate safety activities of the Ohio fund. The fund does not directly employ inspectors or safety engineers, and unfortunately it does not have an adequate working relationship with the inspection departments of the Industrial Commission. Risks are not rated upon the basis of physical hazards. If, however, the actuarial division is able to put into effective and extensive operation its accident prevention laboratory, this should secure most constructive results in accident prevention.

The above accident prevention laboratory is distinctly a new development in the workmen's compensation field, and has been devised by the present actuary of the Ohio fund. In this laboratory, accidents are analyzed instantaneously upon reaching the actuarial division, as to cause, nature, etc., and the results of such analysis are punched on cards. These cards are sorted and tabulated by risks monthly, and carried to group analysis sheets. Copies of such analysis sheets are provided not only to the safety engineers, and workshops-factory and mining inspectors of the commission, but copies are also provided directly to the employers.

¹ The claims division has 3 referees, 7 field investigators, and 8 medical examiners, all at salaries which range from \$1,000 to \$3,500 per annum.

The auditing and actuarial division appear to be reasonably well supported as respects the everyday work of rating risks, writing policies, auditing pay rolls, collecting premiums, and issuing warrants, though they have woefully underpaid employees. Accounts are well kept, collections are unusually prompt, and the records of classification and individual risk experience are in excellent order. But the broader work of statistical compilation, so vital to the maintenance of a sound rate system, has fallen behind for want of funds. Detailed and up to date statistics of accidents, their severity, causes, and compensation cost, are indispensable to a sound structure of classification rates, to sound experience rating, and to intelligent accident prevention. The Ohio fund possesses the primary sources for a larger volume of statistical experience than any other insurance carrier in the United States; not alone its own experience, but that of self-insurers as well. If provided an adequate appropriation, the fund can make the most effective use of this rich material. The cost of completing the statistical analysis will not be great. The claim records have been made up in full, the cards in most cases punched. The mechanical equipment of the actuarial division is all that could be desired. All that is needed is to employ a few additional clerks and to appoint a trained statistician to relieve the overburdened actuary from the task of supervising statistical detail.

The limited funds available for the Ohio fund appear to be employed to the best advantage. All appointees are under civil service and the character of the personnel appears, by actual observation, to be exceptionally good. But the funds available are woefully inadequate to the needs. The gross amount is rigidly determined two years in advance without reference to the probable volume of business.

Whether the cost of administration of a State fund for compensation insurance should be supported out of general taxation or premium income is a question of public policy with which this report has no call to deal. If, however, the State assumes the cost of administration, the plainest dictates of public policy require that the grants shall be commensurate with the functions to be performed. To impair the service on the specious plea of economy is pro tanto to defeat the objects of workmen's compensation. To meet reasonable needs the appropriation for the compensation department of the Industrial Commission should be at least double the present amount and should be made in lump sum so that it could be used for one or another function as circumstances might require.

In conclusion, I have to thank your honorable body for the very courteous treatment received at your hands and for the great facilities placed at my disposal in the conduct of the examination. All books, records, and accounts were freely produced, all files laid open, and every possible assistance rendered by your staff, whenever called for by me. Thanks to this hearty cooperation and to the excellent state of the records, it was possible to complete a very voluminous examination in a relatively short space of time. With respect to the state of the records, it is sufficient to say that everything called for—bond lists and bank deposits, earned and unearned premiums and premiums in course of collection, itemized budgets, analyzed claim lists of many kinds—was promptly forthcoming.

Damage-Suit "Runners"—Laws of New York and New Jersey.

SOME of the most persistent opposition that has been made to the enactment of compensation laws has come from the so-called damage-suit lawyer, whose business largely consists in the prosecution of suits for personal injuries. The business is of

course not restricted to suits by employees against employers, railroads, street railways, and automobile owners being prominent among those against whom damage suits may be brought by members of the public on account of injuries received. However, the amount of business arising from industrial accidents is regarded by them of such importance that they have definitely and even openly set themselves against compensation enactments which would either reduce their fees or dispense with their services altogether. Even on the floor of the Senate of the United States it was boasted in a debate on the Sutherland bill for a railroad compensation law in 1912 that the Senator speaking on the subject made "the railroad companies twist and squirm," and was opposing the bill so that he might be able to do it again, as the prosecution of such suits "is all the kind of business I do."

In the carrying on of such business there has developed a class of persons known as "runners" or "ambulance chasers" who make it a business to solicit suits for lawyers by whom they are employed or with whom they are in an agreed relation. In 1917 the New York Legislature amended section 270 of the penal law of the State, which relates to practice or acting as attorney at law without being registered, so as to make it also an offense "to make it a business to solicit employment for a lawyer, or to furnish attorneys or counsel or an attorney and counsel to render legal services." This is obviously an attempt to restrain the activities of the "runner," and the New Jersey Legislature of the current year (ch. 223) has enacted a law of similar tenor, making it unlawful for "runners" to solicit damage suits.

What appears to be the first attempt at an enforcement of the provisions of the amended New York statute resulted in the conviction in the Supreme Court of the State, county of Orange, of one Harry Meola, on June 20, 1919, in that he did "unlawfully and feloniously engage in and made it a business to solicit of divers persons employment for a lawyer and divers lawyers, * * * all without the invitation, request, or consent of any of said divers persons," said Meola not being a duly licensed and registered practitioner of the law in the courts of the State. A record of the trial discloses the testimony of the witnesses, showing various classes of cases solicited by the defendant, together with representations made by him as to his connection with various lawyers, the district attorney's office, etc. It appears that in one case he suggested that the amount sued for should be \$30,000 and that he would want 40 per cent of the recovery, naming the lawyer by whom the action would be prosecuted. In another case he offered to guarantee the father of an injured workman \$10,000 as a net sum, but he was to receive 40 per cent of the recovery for his services. In another case the defendant offered an agent \$200 if he would influence prospective suitors to turn their business

over to him. These evidences of the method of procedure convinced the jury, under the charge of the court, that the law had been violated, and they brought in a verdict of guilty. Under the terms of the act it was charged that it was not sufficient to find that in a number of cases solicitation had been indulged in; but "did this defendant make a business of soliciting work for a lawyer? Not did he do it in one instance or a dozen instances, but was that his occupation, was that his vocation, was that the thing to which he devoted most of his time?"

On the finding of an affirmative answer to these questions the court assessed a fine of \$100 with a warning that a second offense would mean imprisonment. It is reported that this penalty, though slight, coupled with the warning, has been sufficient to terminate the activities of this solicitor and likewise of the lawyers who were connected with him in the undertaking.

Occupational Diseases Compensable in Wisconsin—A Correction.

IN THE MONTHLY LABOR REVIEW for July, page 186, a brief statement was made in regard to amendments affecting the scope of the compensation laws of Connecticut and Wisconsin. The Wisconsin law was reported as amended in line with the provisions of the British statute as to occupational diseases. Such a proposal was made, but failed of ultimate acceptance. However, a much broader provision than any enumeration of specified diseases could afford was incorporated into the act by amendments enacted as chapters 457 and 668, laws of 1919, thereby including all occupational diseases. This is effected by substituting the term "injury" for "accident" in subdivisions (2) and (3) of subsection 1 of the first section of the act; also by adding a new section to the act, No. 2394-32, which provides: "The provisions of sections 2394-1 to 2394-31, both inclusive, are extended so as to include, in addition to accidental injuries, all other injuries, including occupational diseases, growing out of and incidental to the employment."

The State of North Dakota should also be named in the concluding paragraph among the States whose compensation laws cover occupational diseases. What California and Wisconsin have accomplished by amendment, striking out the word "accident," North Dakota achieved by original enactment; and the term "injury" is construed by the Workmen's Compensation Bureau of the State to include occupational diseases. The laws of five States, therefore, have such inclusiveness—California, Connecticut, Massachusetts, North Dakota, and Wisconsin, besides the Territory of Hawaii, and the law governing Federal employees and public employees of the District of Columbia.

SOCIAL INSURANCE.

Report of Illinois Health Insurance Commission.¹

THE Illinois Legislature of 1917 provided for the appointment of a commission to be known as the Health Insurance Commission to investigate sickness and accidents affecting employees and their families, not provided for by the workmen's compensation law of the State. Adequacy of present methods of prevention and of meeting the losses due to sickness or injury, and propositions for legislative measures to effect such ends were also to be considered. The commission was to be representative of employers and employees and of the public, and was to include a physician, a farmer, a social economist, and a social worker. The secretary was Prof. H. A. Millis, of the University of Chicago, and while he had much to do with the development of the data embodied in the report, he did not take part in the formation of the conclusions and the recommendations.

Public hearings were held in various parts of the State, and much assistance was received from other agencies of the State government and from similar commissions in other States. Special studies on several phases of the subject were made by experts, part 2 of the report containing 16 such special studies or discussions by specially selected authorities in the various fields.

The first part of the report consists of five chapters. The first, entitled "The problem," considers the number ill at a given time, the sickness experience of a year, disabling sickness of wage earners, the cost of sickness, effects on the standard of living, vital statistics, causes of disease and death, responsibility for sickness and premature death, and the prevention of the same. The second chapter is entitled "Combating diseases and conserving health." Under this head are considered the present measures in force and campaigns against special diseases, maternity care, infant welfare work, medical care of school children, etc. The third chapter is devoted to an account of the care of the sick by both private and public agencies. Existing health insurance is discussed in the fourth chapter, accounts being given of establishment funds, trade-union benefit systems, fraternal orders, and other forms of insurance and benefit provisions. The fifth chapter presents the commission's findings and recom-

¹ Report of the Health Insurance Commission of the State of Illinois. Springfield, May 1, 1919. 647 pp.

mendations. This is a summary of the four preceding chapters, presenting in a compact form some of the data and the conclusions derivable therefrom. The recommendations are those of the majority of the commission, Mr. Matthew Woll, a representative of labor, being absent and taking no part in the recommendations; two members of the commission submitted a minority report indorsing the positive recommendations of the other members, but dissenting from the conclusion that the findings of the commission "do not justify it in recommending compulsory health insurance."

No effort was made to conduct an independent census for the purpose of determining the number ill at a given time, existing data being regarded as more satisfactory than any results that the commission could arrive at, considering the means and time at its disposal. Reference was made to the fact that 35 per cent of the men examined in the first draft were rejected as not meeting Army standards, and also that 33.1 per cent of 69,171 applicants for work in Illinois were found on physical examination to be diseased or defective, and that 19 per cent of that number were rejected as not physically suitable for the work applied for. "Block studies" were made of 41 selected blocks in the city of Chicago, the attempt being made to select such as would be typical. Of 2,708 wage-earning families in these blocks 66.5 per cent had one or more cases of serious illness, i. e., causing disability for work or school for a week or more on account of sickness or nonindustrial accident.

The wage loss resulting from sickness is the subject of a rather extensive tabular and text discussion by Prof. H. W. Kuhn, and is summarized by the commission as follows:

In terms of the wage-earning group, it is indicated that 20 per cent will be disabled for more than 1 week, 13 per cent for more than 1 week and less than 4 weeks, 7 per cent for 4 weeks or more, 3.2 per cent for 8 weeks or more, 1.8 per cent for 12 weeks or more, and 0.6 per cent for more than 6 months; that of the entire group of wage earners it may be expected that 8.8 per cent will lose 10 per cent or more and 4.8 per cent will lose 20 per cent or more of what their earnings would have been but for disabling sickness.

The cost of the sickness includes not only wage loss but medical outlay and the total was found to approach \$75 per family per year.

This is more than 5.8 per cent of their incomes from all sources, for these were found to average \$1,298 per family. If these figures can be applied to the entire State, it would mean that the cost of disabling sickness of wage earners alone in Illinois would be about \$57,000,000. If to this is added the medical bills paid for their dependents, the cost of sickness in the wage-earning families of the State would be between \$80,000,000 and \$86,000,000 per year.

Changes in living standards and poverty and dependence result from sickness in a considerable number of cases. In spite of the amount of gratuitous aid furnished by nurses, doctors, and dispen-

saries, and the emergency employment of other members of the family, a cash deficit was reported in 16.6 per cent of the wage-earning families that had sickness during the year.

A summary discussion of the cause of and responsibility for disease is made, "not from a medical viewpoint, but from a consideration of the claim that the community or State, industry and the individual are in varying proportions responsible for sickness and premature death." As to occupational diseases, strictly classifiable as such, the commission is of the opinion that, as a matter of fundamental principle, the cost should be borne by the industry causing the disease. For the more general classes of sickness, however, the majority are of the opinion that a general insurance system "would compel the State and employer to pay for that which they did not cause and for which they are not responsible in any real or tangible sense. The proposal for proportional contribution is based in its ultimate analysis solely upon expediency."

Existing health legislation and public health administration have effected considerable benefits, but have not been as fully developed as the situation demands for the best results. The specific problems of tuberculosis and venereal disease continue to receive the attention that their prevalence and their prominence in recent discussions have brought about, and the commission urges increased activity in regard to both of these subjects. A special commission is recommended to study and investigate maternity and infant welfare work and the extension of provisions for public health nursing in every county of the State is urged. Hospital facilities are found to be inadequate, this inadequacy being most marked in the smaller towns and in rural communities. However, taking the State as a whole, less than 60 per cent of the facilities existing in privately conducted general hospitals were used during the last fiscal year, notwithstanding the fact that the maximum facilities are insufficient. The apparent need is for a larger number of low-priced and free hospital beds.

Taking up the subject of health insurance, the commission suggested that "compulsory health insurance should be tested by what it has accomplished; what would be the probable result in Illinois; whether in the light of the need for, and the effects of, a compulsory health insurance system it would be a sound public policy for Illinois." The nature of the problem of sickness as well as the resulting losses "clearly justifies the application of the insurance principle to the sickness hazard." A study of existing methods of providing for sickness insurance indicates a growing practice among wage earners to procure a measure of protection by this means. Such insurance is generally at the expense of the employees alone, while in some cases

the employer and the employees both contribute, or the employer pays the entire cost. The report continues:

Of the wage earners who were the main support of families, approximately three-fourths had life insurance in some form, averaging \$750 per person. This ordinarily becomes available for the payment of burial expenses as well as for meeting the needs of dependents. * * * The cash benefits paid in indemnification of wage losses vary from \$2 to \$15 per week, during disability, with a limitation generally of from 13 to 26 weeks.

The next point considered is the results that have followed the application of compulsory health insurance systems in those countries where it has been adopted. The commission believes—

There is no evidence that compulsory insurance has resulted in an improvement in health. The death rates and morbidity statistics of the countries which did not have compulsory health insurance show a decline fully equal to that of the countries which have such systems. * * * It seems clear that compulsory health insurance is not an important factor in the prevention of disease or in the conservation of health.

However, it has standardized the insurance against losses attendant upon the sickness of wage earners, and provides partial compensation for wage loss and supplies medical care. It is to this extent, therefore, a material benefit.

Concerning this study of the application of compulsory health insurance systems elsewhere, the report continues as follows:

Our investigations show, however, that a large percentage of the cases of poverty caused or accompanied by sickness would not be avoided by compulsory health insurance of the kind that has been proposed. They show also that it would not prevent as much as a fourth of the cases of dependency upon charitable agencies for material relief.

Ten cents per day will provide the wage earner with all the insurance needed. With few exceptions, the wage earners can meet the cost if they desire. If the wage paid in a given employment is not sufficient, it should be increased, but all employers should not be charged with an increase in wages because of the failure of some to pay a living wage.

The cost of compulsory health insurance in Illinois would be between \$50,000,000 and \$60,000,000 annually, conservatively estimated on the basis of the investigation of sickness among wage earners and the attendant costs. The annual premiums would be something more than the annual cost. If existing health insurance carriers were used and continued their present amount of insurance, there would remain between \$40,000,000 and \$50,000,000 to be carried in State or local funds established. This would inevitably lead to political control and management. * * * Twenty per cent of the wage earners would be entitled to cash payments each year from these public funds, which each year would be replenished to the extent of \$40,000,000.

Other forecasts are made as to the disasters that might be expected to follow the adoption of a system of such magnitude, and the desirability of individual action rather than State compulsion is emphasized. The commission then concludes:

Few could not pay for the insurance if they desired so to do. Society does not consider making it a legal requirement that the individual shall each pay-day save a portion of his earnings to provide against the almost certainty of unemployment, or

that he shall have life insurance to provide against the certainty of death. * * * Guardianship by government of the normal adult man or woman has sooner or later either ended in disaster for the government which attempted it or in the servility of those so governed. * * * It is the opinion of the commission that its findings do not justify it in recommending compulsory health insurance.

The minority report, signed by Alice Hamilton, M. D., and John E. Ransom, a social economist, takes issue with much of the argument and with the final negative recommendation of the majority report. It emphasizes the seriousness of the problem of sickness both on account of the time loss, resulting in loss of wages, and the cost of medical service. It declares that—

The cost of sickness as well as the incidence of sickness was found to be highest in the group with lowest incomes, averaging \$107.33 in families whose incomes for the year were not more than the equivalent of \$850 for a family of man, wife, and three children under 15.

Other points emphasized are the economic and social effects of a permanent nature, the fact that the insurance principle is applicable, and that, in spite of the great variety of methods in use in the State, the great majority of wage earners have no health insurance. Investigation also shows that much of the health insurance carried by wage earners is inadequate and disproportionately costly. "Health insurance provided by casualty companies is very expensive, as shown by the fact that less than half of the money paid in as premiums is paid out in cash benefits to the sick." The need of better organization and medical service is another point touched upon, it being stated as "an indisputable fact that the well to do (outside of the wage-earning class) and those who have recourse to medical charity receive the best medical service." The concluding paragraphs read as follows:

All experience shows that if such insurance is to be extended to more than a mere fraction of the wage earners, it must be compulsory.

We believe that the above analysis of the facts disclosed by the investigations made for the commission is the only logical interpretation of these facts and would have justified the commission in recommending the immediate adoption of compulsory health insurance in Illinois. In our opinion cash benefits partially indemnifying the loss of wages and the provision of medical care for wage earners and their dependents would be of great value. We see no reason why the organization of medical practice under compulsory health insurance could not be so effected as to promote the interests of the insured, the medical profession, and the community as a whole. When health insurance is made compulsory, all experience shows that most of it will be carried by such organizations as those in which a minority are now insured and which will become standardized in order to qualify as carriers. It would perhaps be necessary to establish local mutual organizations for those who could not or would not join existing organizations, but what basis is there for assuming that these would be politically controlled? In view of the fact that the officials of these organizations would be elected by those who contribute to the funds, it seems to us that the assumption contained in the majority report that they would be so controlled is gratuitous.

With reference to the point made in the majority report that compulsory health insurance has not been an important factor in the prevention of sickness, we would not claim that compulsory health insurance is intended as a preventive medical measure. Like many other forms of insurance, it is not intended to eradicate the risk against which it offers protection. We would call attention, however, to the fact that the British Medical Society has expressed the opinion that the medical care of English wage earners has been materially improved under compulsory health insurance. Good medical care prevents much disabling sickness. Moreover, insurance supported in part by industry and the public may arouse a greater interest in the prevention of disease.

The facts presented in this report, and the special studies by the group of experts whose services were obtained, render the volume one that is worthy of serious consideration by those interested in the subject. Whether the forecasts of evil effects to follow the administration of public funds seem likely of fulfillment will depend largely on the previously formed judgment of the reader. They are in no sense based upon any phase of the investigation made by the commission, and can be regarded only as the expression of opinion of the persons signing the majority report. The fact that a considerable number of States have State insurance systems to protect payments of compensation benefits is evidence of the feasibility of such systems under State management. It is difficult to sympathize with the attitude of mind that would relegate the whole subject to the voluntary action of the individual whose need is greatest but whose circumstances are most unfavorable to the making of provision for that need. While it is not desirable to attempt any prophecy, it may be pointed out that the effort to secure the enactment of workmen's compensation laws extended over a considerable number of years before any effective measures were actually adopted; and that the passage of a health-insurance bill by the senate of the New York Legislature at its recent session indicates an increasing approval of the principles of compulsory health insurance, even though it has not yet matured into final action in any State.

Municipal Pensions In New Jersey.

THE Bureau of State Research of the New Jersey State Chamber of Commerce has for two and one-half years been in the service of a pension and retirement fund commission appointed by the legislature of the State. The appointment of this commission was due to a desire to correct the conditions existing in connection with the pension systems in use in the State, and to formulate a policy that could be adopted as sound. A number of reports have been issued covering various phases of the subject, the pamphlet

under consideration presenting a general discussion of principles, a proposed act, and an actuarial statement of costs.¹

The first part discusses existing funds, and accounts for their inadequacy by their failure to recognize the proper actuarial basis. It also gives an account of some efforts at remedial legislation. One of the defects in the funds in operation is the early retirement age, 55 years, after 25 years of service, being most common. Contributions are inadequate, and the pension periods too prolonged by reason of the early retirement to admit of successful operation.

The bill for an act, which is presented as part 2 of the report, fixes 60 years as the age of retirement for policemen, firemen, mechanics, street cleaners, laborers, and others whose duties require mainly physical exertion; and 62 years for clerical, administrative, and technical workers. The allowance is to be one-seventieth of the average salary of the five years preceding retirement, multiplied by the number of years of service, with a minimum of \$400. Disability retirement is also provided for, the minimum to be \$300, or 30 per cent of the average salary of the last five years of service.

Rates of contribution are to be fixed for each class of employees in accordance with their particular rate of mortality, the contributions by the city varying on the same basis. The return of contributions in case of prior resignation or death is to be based on a 3 per cent compound interest rate. Administration vests in a board of five, consisting of officials of the municipality and members chosen by members of the fund. A reinsurance association of the State is proposed as a novel feature in pension systems in this country, its purpose being to furnish an effective guaranty of the safety of the local funds. Funds having less than 100 members must, and larger funds may, reinsure their risks in this fund, all their contributions going into and all payments being made from it.

Part 3 presents actuarial estimates of costs, service, and mortality tables, expectancies for retired and for disabled pensioners, annuity values, etc.

A supplement discusses the question of broadening the scope of pensions in private industry, and presents a list of 92 of the most important institutions having pension systems, with the date of their establishment and the plan in use, i. e., whether contributory or noncontributory.

¹ A Sound Policy for Municipal Pensions: Report of the Bureau of State Research, New Jersey State Chamber of Commerce, Newark, N. J., May, 1919. 24 pp.

Ministry of Health Act of Canada.

THE Dominion of Canada has followed in the footsteps of the parent country in the enactment of a law creating a Department of Health with a minister at its head.¹ This action is the culmination of a movement that has been in progress for a number of years. The preamble to the act states that "it is expedient for the preservation of the health and the promotion of the social welfare of the people of Canada, that a Department of Health be established in the Dominion."

The act was assented to on the 6th of June, 1919. It provides for a minister and a deputy minister, together with such other officers, clerks, and employees as are necessary for the proper conduct of the business of the department. Any existing officer, clerk, or employee now in the employ of the Government may be transferred to the new Department of Health. The duties and powers of the minister are to extend to and include "all matters and question relating to the promotion or preservation of the health of the people of Canada over which the Parliament of Canada has jurisdiction." Without in any way restricting the generality of the foregoing clause certain particulars are set forth, including cooperation with local authorities with a view to the coordination of efforts in behalf of the public health, the conservation of child life, and the promotion of child welfare; the establishment and maintenance of a national laboratory for public health and research work; the inspection and medical care of immigrants and seamen and the administration of marine hospitals; the supervision in so far as the public health is concerned of all methods of transportation and of Federal public buildings and offices. The enforcement of rules and the administration of statutes existing or subsequently to be enacted properly falling within the jurisdiction of the minister is intrusted to him, and he is directed to make statistical and other reports and to distribute information relating to the public health, improved sanitation, and the social and industrial conditions affecting the health and lives of the people. A council of health is to consist of the deputy minister, the chief executive officer of the provincial department or board of health of each Province, and not more than five other persons to be appointed by the Governor in Council who shall hold office for three years. Provincial or municipal boards are in no wise affected by the provisions of this act, nor may the minister or any officer of his department exercise any jurisdiction or control over local authorities.

¹ See MONTHLY LABOR REVIEW for August, pp. 227, 228.

LABOR LAWS.

French Law on Collective Bargaining.¹

BOOK I of the French Labor Code contains the provisions of law governing the labor contract. When the volume was published, containing the code as formulated in 1910, the right of collective bargaining was recognized, but in the absence of a formulation of the code provisions, only a general validation of such agreements was set forth. With the adoption of a complete codification of rules and principles on March 25, 1919, the subject has received a full and definitive treatment, the principal features of which are presented herewith.

A collective labor agreement is defined as a contract relative to conditions of labor, made between the representatives of a trade-union or of any other group of employees, on the one side, and the representatives of a trade organization or of any other group of employers, or several employers contracting under a single title, or a single employer, on the other side. This agreement sets forth the obligations assumed by each party toward the other party, and, especially, certain conditions which must be satisfied by labor contracts, individual or collective, made by persons bound by a collective agreement, either between themselves or with third parties, for the kind of work that is the subject of the said agreement. If there is no clause to the contrary, persons who are bound by a collective labor agreement are held to observe the conditions thereof in their relations with third parties.

The representatives of a group, of either employees or employers, may contract in the name of that group by virtue of statutory stipulations of the group, special resolutions of the group, or special written credentials given them individually by all the members of the group. In the absence of any of these, a collective agreement must be ratified by a special resolution of the group.

A collective agreement must be in writing, and becomes effective on the day after it is filed in a public office. The parties must state whether the agreement is to be in force everywhere, or in a certain region or locality, or only in one or more specified establishments. In case this is not stated, agreements are to be valid only in places where copies have been filed in public offices.

¹ Bulletin du Ministère du Travail et de la Prévoyance Sociale. April-May, 1918. P. 74. Paris.

An agreement may be made for an indeterminate length of time, for a definite time, or for the duration of a given undertaking or enterprise. A collective agreement of indefinite duration may be ended at any time by either of the parties thereto, but every group of employees or every employer or group of employers must renounce it in order to effect this. When an agreement is made for a definite time, such time may not exceed five years; but, unless expressly provided to the contrary, the agreement continues after the expiration of the five years until terminated by the parties. If a collective agreement is made for the duration of a certain undertaking, and that undertaking is not concluded in five years, then the agreement is considered and treated as having been made for five years.

Any trade-union or other group of employees, or employer or group of employers, who are not parties to a collective agreement, may subsequently adhere to the agreement with the consent of the contracting parties. Notification of such adhesion and of the consent of the contracting parties must be filed in the public offices where the agreement is on record.

The following are enumerated as being bound by a collective labor agreement:

Employees and employers who sign an agreement, and those who give them credentials to negotiate in their name.

Those who at the time the agreement is made are members of a group which is a party to the agreement, unless within a period of eight days from the filing thereof they shall notify the public office in which the agreement is recorded that they have resigned from the group. When the agreement is for the purpose of ending a strike or lockout the period for resigning is reduced to three days.

Those who, after the filing of an agreement, join a group which is a party to that agreement.

The first two of the foregoing provisions apply likewise to members of groups subsequently adhering to an agreement, the periods of eight and three days dating from the notice of adhesion.

When a collective agreement is made for a definite time or for the duration of a certain enterprise or undertaking the following are considered as bound by the terms: Employees and employers who sign an agreement, and those who give them credentials to negotiate in their name; groups which are parties to the agreement, either by participation in the making of it or by subsequent adhesion to it; employees and employers, members of organizations which are parties to the agreement, who adhere directly for a definite time or the duration of an undertaking by notification to the proper public office. Every agreement is considered as being of indefinite duration as regards persons who are bound by it, other than those enumerated

Provisions for Withdrawal.

Every group of employees or employers, or independent employer, parties to a collective agreement which was entered into for, or by tacit consent has been prolonged for, an indefinite period, may at any time withdraw from the agreement, provided notice be given one month in advance to all the other parties, the groups with whom the agreement was made, and the public offices in which the agreement was filed.

When the withdrawal of a single group does not effect the cancellation of the agreement, the other parties may, within 10 days from the receipt of notification from the group withdrawing, send notice of their intention to withdraw on the date set by the first group. The withdrawal of a group legally relieves every member of that group, notwithstanding any agreement to the contrary.

A member of a group of employees or employers which is a party to a collective labor agreement made for, or prolonged for, an indefinite time, or considered as being for an indefinite time as regards the member in question, may at any time withdraw from an agreement by resigning from the group through which he was bound in the agreement, and notifying the proper public offices and authorities. This notice must be made one month in advance, notwithstanding any agreement to the contrary. When by mutual consent a collective agreement is prolonged for a certain length of time, any member of a group remaining a party to that agreement may withdraw from the agreement within the week following the extension of the agreement, by following the procedure described above. These rules also apply to any person who, having resigned from his group, has continued to be bound by an agreement.

No employee or employer may renounce for a period longer than five years his right to withdraw from an agreement in force. No employee may, by a stipulation in a labor contract, renounce his right to withdraw from a collective agreement in force, for a period longer than that for which the employer himself is bound. A renunciation of the right to withdraw from a collective agreement in force, by either an employee or employer, is not valid unless and until notice has been given at the proper public office. No agreement is legal whereby an employee or employer renounces his right to withdraw from a collective agreement by resigning from the group through which he has been bound in the collective agreement, nor whereby either renounces his right to refuse credentials to representatives to negotiate for him.

When a labor contract is made between an employee and an employer who are bound by obligations arising from a collective labor agreement, the rules set forth in the said agreement shall govern relations arising from the labor contract, notwithstanding any stipulation to the contrary. When only one of the parties to a labor contract is bound by the clauses of a collective labor agreement, these clauses are assumed to be applicable to relations arising from the labor contract, in the absence of any stipulation to the contrary.

A party who is bound by a collective agreement which obligates him even in regard to third parties, and who seeks to accept in regard to such third parties conditions contrary to the rules set forth in the agreement, may be sued in a civil suit for nonperformance of obligations assumed by him.

Groups of employees or employers bound by collective agreements are forbidden to do anything of a nature to compromise the faithful execution of the agreement, but are held responsible for that execution only in the measure set forth in the convention.

Groups bound by collective agreements, who are capable of bringing suits in court, may in their own name bring actions for damages against other groups parties to the agreement, against members of these groups, against their own members, and all persons bound by the agreement who seek to violate the obligations assumed. Persons bound by a collective agreement may bring damage suits against other persons or groups involved in the agreement. Groups capable of bringing court actions may bring suit, on any point arising from an agreement in which they are bound, on behalf of any of their members, without having to obtain from him a special order to do so, providing he has been notified and has not opposed the procedure. The interested person may always participate in a law suit brought by his group. When an action arising from a collective agreement is brought by either an individual or a group, the other groups capable of suing in court, parties to the same agreement, may always participate in the action being brought, because of the collective interest the litigation may hold for their members.

A collective labor agreement may legally contain provisions by which the parties leave to arbitrators, either designated or to be designated in specified forms, the determination of all or part of the disputes which may arise in the execution of the agreement.

Collective labor agreements in force before the promulgation of the present law remain in force, even if the filing of such agreements and the notices relative thereto in public offices has not been effected.

Compulsory Rest Law of Peru.¹

A COMPULSORY rest law, passed by the Peruvian Congress in December, 1918, provides that on Sundays, civic holidays, and election days work is prohibited in the following: Factories, shops, commercial houses, mines, salt works, quarries, construction work; agricultural operations in which mechanical motors are used; public work, including charitable and educational institutions, whether carried on directly or through contractors. All teachers and students of all schools and colleges in the Republic, without exception, are included.

Although the law allows no exception in regard to women, and minors under 18 years of age, the following exceptions to the rest rule are made in the case of men: Work in commercial houses, if municipal permit is obtained; the selling and exchanging customary on Sundays and holidays in some towns; incidental repairs and cleaning necessary to prepare for the following week's work; work in stores selling food and other necessities; work necessitated by fortuitous circumstances which, if not attended to, might result in injury to the public or to the business itself; work, continuous by nature, which has been begun on a week day; work of the sanitary and health service which must be done daily; such irrigation work on farm land as falls unavoidably on a Sunday or holiday; hotel service.

All persons, however, who work on the usual days of compulsory rest must be given 24 hours of continuous rest during each week.

¹ El Peruano, Lima, Mar. 22, 1919.

HOUSING AND LAND SETTLEMENT.

Progress of the California State Land Settlement at Durham.

THE results, after less than two years since its incipency, of the first experiment in the United States of land settlement under State supervision and authority, are set forth in a pamphlet issued by the California State Settlement Board¹ giving an account of the progress of the land settlement at Durham, Calif. This settlement was the immediate outcome of the State Land Settlement Act which was passed by the legislature in June, 1917, the purpose of which was to furnish a demonstration of "what could be done by planned rural development, adequately financed, and to show how people of small means could be helped by the State to secure farms and rural homes without this aid becoming a burden to the taxpayer."

A board to administer the act was appointed in August, 1917, and authorized to buy, improve, and sell to settlers 10,000 acres of land,² under general conditions which, as summarized in the present pamphlet, include the following:

Land must be sold either as farm allotments, each of which may have a value not exceeding, without improvements, \$15,000, or as farm laborers' allotments, each of which may have a value not exceeding, without improvements, \$400.

Applicants must be citizens of the United States, or have declared their intention to become citizens.

The State Land Settlement Board reserves the right to reject any or all applications it may see fit to reject.

Settlers make a cash payment on land of 5 per cent and can have up to 40 years to complete the payments. They may obtain a loan of 60 per cent of the cost of houses and other permanent improvements and can have 20 years in which to repay this loan. The loans for all improvements and equipment can not exceed \$3,000. The repayment of loans, which may be made by the board, on live stock or implements, may extend over a period of five years.

Every contract entered into between the board and an approved purchaser shall contain among other things provisions that the purchaser shall cultivate the land in a manner to be approved by the board and shall keep in good order and repair all buildings, fences, and other permanent improvements situated on his allotment, reasonable wear and tear and damage by fire excepted.

¹ Information regarding progress under the Land Settlement Act of the State of California and about the plans for soldier settlement in the future. Published by authority of the State Land Settlement Board, May 30, 1919. Sacramento, 1919, 43 pp.

² A pamphlet setting forth the offer of the board under the heading of "California State Land Settlement Board. Farm allotments and farm laborers' allotments in the Durham State land settlement located at Durham, Butte County, Calif.," was noted in the November, 1918, issue of the MONTHLY LABOR REVIEW, p. 310.

No allotment sold under the provisions of this act shall be transferred, assigned, mortgaged, or sublet, in whole or in part, within five years after the date of such contract, without the consent of the board given in writing.

Actual residence on any allotment shall commence within six months from the date of the approval of the application, and shall continue for at least eight months in each calendar year for at least 10 years from the date of the approval of the said application, unless prevented by illness or some other cause satisfactory to the board; provided, that in any case any farm allotment disposed of is resold by the State, the time of residence of the preceding purchaser may, in the discretion of the board, be credited to the subsequent purchaser.

The prices of land, in each farm, were fixed with due consideration to all influencing factors, such as character of soil, roughness, accessibility, etc., the character of the soil being the chief reason for variation in price, the soil survey disclosing the fact that practically no two tracts were exactly alike. The total price of farm units ranged from \$3,600 to \$15,000, the average selling price being \$150 per acre. This increase over the purchase price covers the administration expenses, cost of roads, irrigation improvements, etc. The terms of purchase were 5 per cent down and 5 per cent interest on the unpaid balance. To the interest was added a 3 per cent annual payment on the principal, making 8 per cent a year, which pays for the farm in 20 years. Amortizing the payments lessens the heavy burden of the higher interest amounts in the earlier years.

Where improvements had been made on the property, when sold to settlers, a cash payment of 40 per cent of the value of these improvements was required; the balance to be paid in half-yearly installments extending over 20 years. On both land and improvements settlers might make a larger initial payment, or might pay off more than one installment on any interest date after five years.

Two tracts of land having a total area of 6,219 acres, located in Butte County, in the Sacramento Valley, were purchased, largely from the University of California, at a cost of \$100 per acre for the land which could be irrigated, and \$10 per acre for the remainder of about 700 acres. This became known as the Durham Settlement. About 3,500 acres were available for immediate settlement, and were subdivided into 52 farms and 21 farm laborers' allotments and offered to settlers in May, 1918, while 27 additional farms and 5 farm laborers' allotments were opened for settlement in November, 1918. All of the allotments have now been sold and settled except 700 acres of pasture land and 320 acres of farm land. The farms vary in size and adaptability to different kinds of farming, some running as high as 160 acres, while fruit farms, as a rule, are small. The farm laborers' allotments consist of areas of two acres or less. Experience having shown a demand for areas between the farms and the wage earners' homes, the law was amended in 1919 to permit of farm workers' areas having a value of \$1,000.

The report states that among the advantages which the Durham Settlement offers to settlers are a cooperative stock breeders' association of which all the settlers are members and which was organized with a view of making Durham the home of pure-bred live stock; the aid which it offers in improving farms, building fences, houses, etc., the settlement system of roads, irrigation, drains, superintendent service; and a community center and other social features.

Although less than a year old, the progress of the settlement has been so encouraging that the legislature this year (1919) appropriated \$1,000,000 for continuing the settlement policy and authorized a bond issue of \$10,000,000, which latter, if ratified by the vote of the people, will enable the board to proceed with land settlement in a more systematic and economical way than heretofore.

State Aid for Workmen's Dwellings in Italy.

ON MARCH 23, 1919, a vice regal decree (No. 455) was issued in Italy which provides for extensive state aid for the construction of workmen's dwellings.¹ The *Carriere della Sera*² comments on the decree as follows:

According to the terms of the decree the following may obtain State aid in the construction of workmen's dwellings: The communes, workmen's building and cooperative societies, public-welfare associations, and the National Building and Cooperative Society of Government Employees at Rome. The Deposit and Loan Bank will place a sum of 100,000,000 lire (\$19,300,000) at the disposal of the communes and local authorities, and when this sum has been exhausted further amounts will be provided. A special division for building loans is to be established in the National Cooperative Credit Institute, to which the State will contribute. This division will have a sum of 20,000,000 lire (\$3,860,000) available to begin with, and it is authorized to issue bonds up to eight times the amount of its capital. The local authorities and cooperative building societies will also be able to obtain building loans from the local savings banks, land banks, the National Insurance Institution (*Cassa Nazionale di Previdenza*), chattel loan banks, mutual aid societies, etc. It is estimated that about 400,000,000 lire (\$77,200,000) will be available for loans for the construction of workmen's dwellings. The State will contribute a part of the interest payable on these loans, which may be graduated so as practically to cover the whole of the interest for the first years, gradually reducing its contribution in the succeeding years.

In order to obtain State contributions the houses must be built within 5 years of the date of the decree, and must be owned by communes, local authorities, or by cooperative societies. To begin with, the State will set aside a sum of 10,000,000 lire (\$1,930,000) annually for the purpose. The loans will be made by the Deposit and Loan Bank at 4.5 per cent, and other institutions will not be able to charge a much higher rate. In addition to the above facilities in the way of loans, workmen's dwellings will be exempt from all taxation for the first 15 years, and a rebate of 50 per cent of the taxes for the following 5 years will be granted.

Various powers are given to the communes under the decree:

1. To subsidize building associations or companies and to contribute toward building loans and the payment of interest on these loans in certain circumstances.
2. To grant exemptions from local taxes and duties on building materials.
3. To make free grants of land or to sell at cost price property belonging to the communes, if buildings are erected within a specified time.
4. To expropriate by simple prefectorial decree privately owned land required for building.
5. To expropriate in a like manner all unsanitary dwellings, if the necessary improvements are not made within a specified time.

¹ Italy. Bollettino dell' Ufficio del Lavoro. Vol. 7, No. 8. Rome, Apr. 16, 1919. pp. 93 ff.

² Carriere della Sera. Rome, Mar. 23, 1919.

6. To establish municipal housing offices for the purpose of supervising the housing market, all real estate owners being required to make a return of rents, vacant premises, etc., to the housing office of their commune.

Private builders of workmen's dwellings are also granted certain exemption from taxation. Buildings to be used as dwellings, and erected within five years, will be exempt from land and property taxes for the first six years and from half the tax for the following four years. Dues on the transfer of such property will be reduced by 25 per cent during five years. The communes, local authorities, cooperative societies, and the Building Trades Federation will receive preference in the distribution of building materials which are at present in the possession of the State. The building material factories which have been requisitioned by the State are to be restored to their owners without delay, and transport facilities for coal are to be granted to such factories.

Dwellings for Public Employees in Peru.¹

A PERUVIAN law, dated December 28, 1918, details a plan to build 100 workmen's dwellings, for sale to public employees of over five years' service receiving wages of not more than 15 libras (\$75),² Peruvian gold.

The executive department is to sell sufficient Government land in Lima to a financial institution—either the Savings Bank of Lima (*la Caja de Ahorros de Lima*) preferably, or a combination of the National Insurance Companies (*Compañías Nacionales de Seguros*) in Lima under the Mortgage Trust Company (*Credito Hipotecario del Peru*)—which will build the houses according to plans and estimates approved by the executive department.

The price of the houses is stipulated as "the value invested in land and construction." They will be sold on terms of either 10 or 20 years, 5 per cent cash payment, and balance in monthly payments. These monthly payments will include, beside principal, 6 per cent interest per year, a fixed charge or commission of 1 per cent per year, and an aliquot part payment of a fire insurance premium. If the buyer desires to insure the property to his family, an aliquot part payment on life insurance is included in his monthly payments.

The houses are sold on lease contracts, the titles not passing until full payment has been made; and until full title has been acquired, the buyer is not permitted to dispose of a house except through the institution that built it.

Bonds may be issued by the building institution in the amounts and with the guaranties stipulated in existing laws on the subject. All contracts and procedure required by this law are free from the usual taxes and fees that are required for registration, stamps, papers, and incomes, and shall remain exempt from any such imposts laid in the future.

The Government guarantees the capital invested in these 100 houses, the 6 per cent annual interest on the same, and the fixed charge of 1 per cent per year.

¹ El Peruano, Lima, Mar. 26, 1919.

² Presumably per month, although not so stated in the law.

LABOR ORGANIZATIONS.

Tenth German Trade-Union Congress, Nuremberg, June 30-July 5, 1919.¹

A FEW weeks before the outbreak of the war the German trade-unions had held their ninth congress at Munich, a congress noteworthy for its pronounced hostility to the repressive measures planned at that time by the Government. During the war the further convening of this parliament of the German working class had, for a number of weighty reasons, been impossible. The end of the war finally made possible the holding of the tenth congress, which was in session at Nuremberg from June 30 until July 5.

In point of membership the Nuremberg congress showed that the trade-union movement has reached the highest point in its history. While in July, 1914, the membership of the Free Trade-Unions was 2,521,000, it fell to 995,000 during the first half of 1917, but by the middle of 1918 it had again risen to 1,370,000 and by the end of that year to 2,864,000. The membership experienced its greatest increase, however, during the current year as the result of the revolution. In February it had reached its third million, in May its fourth, and on the occasion of the congress a membership of nearly 5½ millions was reported.

It is evident that the trade-union movement is the strongest and most influential factor in Germany's present economic life, and it is not surprising, therefore, that the proceedings of the congress were followed with keen attention by the German public. It was expected that the differences of opinion within the German Social-Democratic party would influence the trade-union movement and would manifest themselves at the congress. This expectation was fully realized.

Report of the Executive Committee.

The congress was attended by 644 delegates, the largest number ever present at a German trade-union congress. Chairman Legien, of the executive committee (*Generalkommission*) of the Free Trade-Unions, submitted to the congress the business report of the committee. An animated discussion of the report, lasting two days, followed. The truce between capital and labor declared at the beginning

¹ Die Gewerkschaft, Vienna, July 15 and 22, 1919, and Kölnische Zeitung, Cologne, July 5, 1919.

of the war, the support of the auxiliary national service law (*Hilfsdienstgesetz*) and of joint industrial leagues (*Arbeitsgemeinschaften*), and the ostensible upholding of the war policy of the Government by the trade-unions, formed the principal subjects of the discussion. Owing to the widely differing views on these subjects of the conservative and radical factions among the delegates, no attempt was made to reach a basis for a unanimous vote. Finally the following resolution was adopted:

In accepting the report of the executive committee as to its activities during the past business period the Tenth Congress of the German Trade-Unions declares itself convinced that within the sphere of its tasks the executive committee has endeavored to represent and promote the economic interests of the German working class. The congress, therefore, emphatically denies the accusations made in public that the committee betrayed the working class during the war. Fully aware of the fact that differences of opinion may exist as to the suitable solution of individual problems coming before the trade-unions the congress expresses to the executive committee its confidence.

A total of 445 delegates, representing 3,307,335 members, voted for this expression of confidence, while 179 delegates, representing 1,483,779 members, voted against it. The opposing minority was therefore considerable. Nevertheless this result is not likely to be specially gratifying to those factions of the labor movement which had hoped for a radical change in the policy of the trade-unions.

Political Neutrality.

The next subject on the agenda was a resolution dealing with the political neutrality of the unions. The text of this resolution which was adopted by both factions of the congress is as follows:

The Tenth Congress of the German Trade-Unions declares that the trade-unions must, without prejudice to the political or religious conviction of the individual worker, unite all workers in the safeguarding of their economic interests.

The Mannheim agreement of 1906 with the Social-Democratic Party of Germany, which provides that in the case of problems involving interests of the entire working class an understanding be arrived at by the directorates of both central organizations, had the object of increasing the militant strength of the working classes through prevention of differences between the political and the trade-union labor movement. The political neutrality of the trade-unions toward their members was not affected by this agreement.

But this agreement presupposed a unitary political representation of the interests of the German workers, which no longer exists. The split in the Social-Democratic Party endangers also the unity and solidarity of the German trade-unions. Consequently, the Trade-Union Congress is compelled to proclaim the political neutrality of the trade-unions toward the political parties. The struggles caused by political differences of opinion among the workers must not be permitted to weaken the militant strength of the trade-unions, the representatives of their economic interests.

The trade-unions, however, must not limit themselves to narrow representation of the occupational interests of their members, but must become the center of the class aims of the proletariat and aid in achieving victory in the struggle for socialism.

Attitude Toward Unauthorized Strikes.

The attitude of the trade-unions toward the present numerous unorganized strikes and the Government measures for their repression was discussed by the congress in connection with a resolution passed at the Conference of Trade-Union Directorates (*Vorstandskonferenz*), held in Berlin immediately before the Congress. This resolution, which dealt with the railroad strike then impending, was adopted by the congress without any amendment. Its text is as follows:

In view of an impending railroad strike the Minister of National Defense on June 26 issued an order which, until further notice deprives part of the railroad workers of the right to strike.

The Tenth Congress of the German Trade-Unions admits that at the present time a strike of the German railroad workers would cause immeasurable injury to our languishing economic life and aggravate the sufferings of the working classes by bringing on general disorganization. Like the competent trade-union organizations of the railroad workers, the congress disclaims any community with the unauthorized strikes already in progress which have been called by irresponsible persons.

Nevertheless the Trade-Union Congress protests against any abrogation of the right of the railroad workers to strike, even if such abrogation is only temporary, for the right to strike belongs to all German workers and salaried employees as an achievement of the revolution. The present prohibition is, moreover, inexpedient, because strikes can not be prevented by prohibitions but only by agreement with the trade-union organizations of the workers.

The Trade-Union Congress urgently appeals to the railroad workers and to the entire working population to leave the representation of their interests to their trade-union organizations exclusively and in view of the wretched situation of Germany and of her working people to refrain from all unauthorized strikes.

It should be mentioned here that as a direct consequence of this resolution the ministerial order prohibiting railroad strikes was rescinded.

Public Boycott.

The following resolution was adopted relative to the boycott:

A public boycott shall be decreed only by a resolution of a full meeting of the local committee, on the vote of at least two-thirds of the local unions. If it is intended that a boycott shall extend over a whole district, or over the whole country, the directorates of the unions concerned must secure the approval of the directorate of the federation. A trade-union boycott against suppliers of cooperative stores shall be decreed only after an attempt to remove the existing differences and when the mediation of the directorate of the Central Association of German Cooperative Stores has proved unsuccessful.

Guiding Principles for the Future Lines of Action.

The greatly differing views of the delegates with respect to the present and future tasks of the trade-unions led to a stormy debate when the guiding principles for the future lines of action of the trade-unions were discussed by the congress. Delegates Leipart and

Cohen, representing the majority of the congress, advocated "consistent continuance of the policy adopted by the majority of the trade-unions and the executive committee after the overthrow of the monarchy, a policy which, in spite of considerable opposition, has been approved by a large majority of the German workers, as is evident from the recent rapid increase of the membership of the trade-unions. This policy is opposed to all sudden changes in the activities hitherto pursued by the trade-unions, and the task devolving from the formation of new political conditions is merely that of attaining more speedily the general aims of the trade-union movement. In these aims are included not only a greater development of protective labor legislation and the securing for the worker of a larger share of the proceeds of production, but also the transformation of private ownership into public ownership, in other words, the socialization of the means of production. These are the enlarged tasks of the trade-unions and of the newly created works councils."

The radical minority of the congress and its spokesman, Richard Müller, took an entirely different view of the tasks of the trade-union movement. They regarded the above program as nothing less than a strengthening of the capitalistic economic system and even maintained that the works councils were no serviceable agency for promoting the transformation of private into public ownership. The joint industrial leagues, supported by the executive committee of the trade-unions chiefly as a means of improving the German economic situation, were attacked even more violently by the opposition and its leader. They demanded the substitution of the soviet system, as it is in force in Russia and Hungary, for the institutions planned by the congress and for those already incorporated in the administration of the State.

As was to be expected a large majority of the delegates approved the views expressed by Delegates Leipart and Cohen, the spokesmen of the executive committee, and the following resolution was adopted:

The guiding principles for the future lines of action of the trade-unions include in the first place a clear and unequivocal declaration of adherence to socialism. The trade-unions are indispensable during the period of transition as well as in the socialistic order of society. The right of workers to joint deliberation on all questions of production, from the individual factory up to the highest authorities of the central economic organization, must be secured. The system of works councils shall be further developed occupationally and territorially along with a system for the representation of establishment managers. Autonomous economic organs (joint industrial councils) shall be formed. Within the joint industrial councils the trade-unions shall take the lead in the endeavor to formulate a clear-cut policy with respect to the works councils.

Works Councils.

Concerning works councils the congress adopted the following resolutions by a vote of 407 to 192:

In the conclusion of collective agreements the establishment and tasks of works councils shall be regulated as follows: In each establishment employing at least 20 workers a works council shall be elected, by secret ballot, from the male and female workers over 18 years of age. In establishments employing less than 20 workers the representative of the trade-union shall take the place of the works council with all the rights of the latter. The election of the works council must take place not later than four weeks after the coming into force of a collective agreement or after the opening of a new establishment. A new election of the works council shall take place yearly. The employers shall compensate the members of works councils for possible loss of earnings or for expenses incurred in the exercise of their duties as members. The employer shall in due time be notified of meetings of the council to be held during working hours. The works council shall have the right of joint deliberation in all matters relating to the operation of the establishment in which the workers play an active part or have a legitimate interest. It shall be the duty of the works council to safeguard the rights appertaining to the workers by law or through a collective agreement and to defend these rights against the employer.

With respect to a preliminary draft of a Government bill on works councils the congress made the following declaration:

After taking cognizance of the preliminary draft of the works council bill of May 15, 1919, the congress declares that in essential parts this draft does not correspond to the justified expectations of the workers. Our representatives are herewith requested to cooperate in the drafting of this bill so that a serviceable and effective law safeguarding the interests of the workers may be created. The draft shall receive the approval of the representatives of labor only if the full right of the workers to joint deliberation in all labor matters is given expression in it.

Joint Industrial Leagues.

The text of the resolution dealing with joint industrial leagues (*Arbeitsgemeinschaften*), which was adopted by a vote of 420 to 181, is as follows:

The Tenth Congress of the German Trade-Unions sees in the joint industrial leagues the logical continuance of the collective-agreement policy of the trade-unions. The joint industrial leagues signify the recognition of the equal rights of the workers and are well adapted to the realization of the workers' right of joint deliberation and the collective regulation of the labor contract. The joint industrial leagues serve this purpose everywhere that private ownership has not been replaced by public ownership.

On the understanding that complete parity of representation is accorded to the workers in all the institutions of the joint industrial leagues as well as in all negotiations and in all corporations having to do with the development and promotion of our economic life, the congress recommends that all trade-unions take an active part in the work of the joint industrial leagues.

Creation of the General German Trade-Union Federation.

Up to the meeting of the Nuremberg Congress the connection of the individual German Free Trade-Unions with their central organization, the "Generalkommission," was rather loose. The congress, therefore, resolved to create a closer tie by founding the General German Trade-Union Federation, the object of which is the constant cooperation of the various unions in the protection of the interests of the organized workers of Germany. According to by-laws of the newly founded federation it is hoped to realize this object—

1. By furthering trade-union propaganda, by the collection and utilization of socio-political material and trade-union statistics, and by the issue of pamphlets.

2. By fostering the protection of the working classes, by the retention of counsel in legal cases, and by managing the election of socio-political representatives of the workers.

3. By the arrangement of courses in trade-unionism, the delimitation of spheres of organization and agitation of the unions, the management of exceptional conflicts, and the furthering of international relations with the unions of other countries.

The discussion of the proposed by-laws of the new federation resulted in a very animated debate over the question of whether the unions should be organized by trades or by industries. The retention of the former organization by trades was, however, resolved by a large majority.

The following are the most important provisions of the by-laws adopted with respect to the organization of the federation:

Any trade-union which subscribes to the by-laws of the federation and to the resolutions of the trade-union congresses and is not in competition with an already admitted trade-union may become a member of the federation.

The directorate of the federation which takes the place of the former executive committee (*Generalkommission*) shall be composed of 15 members of whom 7 shall be paid employees of the federation and the remaining 8 shall serve without compensation. The directorate shall be assisted by an advisory council composed of one representative of each adhering trade-union, as a rule the president of the union. In special instances the editors of trade-union journals may be permitted to attend the meetings of the advisory council in a consultative capacity. The functions of the directorate and of the advisory council remain nearly the same as those of the former executive committee and of the conference of directors (*Vorstände-konferenz*).

Each trade-union is to pay quarterly into the treasury of the federation 5 pfennigs (1.2 cents) per member.

Every third year the directorate of the federation must convene a trade-union congress. Special congresses may be convened, if necessary, on resolution of the advisory council or on motion of at least one-half of the adhering trade-unions.

If a trade-union is unable to continue with its own means a wage movement commenced by it the federation shall, after approval by the directorate, grant strike benefits to that union. The weekly grant shall be 12 marks (\$2.86) to each striking or locked-out worker who has belonged to the union for at least 13 weeks, and 16 marks (\$3.81) to each worker who has belonged to the union for at least 26 weeks. The sums required for this aid are to be assessed on all adhering trade-unions.

STRIKES AND LOCKOUTS.

Strikes and Lockouts in the United States, April to June, 1919.

ACCORDING to information received by the United States Bureau of Labor Statistics, 1,016 strikes and lockouts occurred in this country during the second quarter of the year 1919. Inasmuch as many reports do not reach the Bureau until several months after the strikes occur, the number of strikes occurring during the quarter was probably somewhat larger than the above figure would indicate. Complete data relative to these strikes have not been received by the Bureau and it has not been possible as yet to verify what have been received. The figures in the following tables should therefore be understood to be only an advance statement and not to be accepted as final.

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, JANUARY TO JUNE, INCLUSIVE, 1918 AND 1919.

Kind of dispute.	Jan- uary.	Feb- ruary.	March.	April.	May.	June.	Month not stated.	Total.
Strikes:								
1918.....	180	208	293	301	377	284	165	1,811
1919.....	173	197	185	246	389	289	93	1,572
Lockouts:								
1918.....	8	11	11	10	6	6	12	64
1919.....	8	12	5	11	21	9	5	71
Total:								
1918.....	188	219	304	311	383	290	180	1,875
1919.....	181	209	190	257	410	298	98	1,643

The quarter was prolific in strikes. The one involving the largest number of persons was probably that of the clothing workers in New York, in which 50,000 were said to have been engaged. This was followed by 35,000 textile workers in New Bedford in June. Other strikes involving large numbers of employees were those of telegraphers in June in the South and West, telephone operators in New England in April and in California in June, linotype operators in Brooklyn in June, the American Railway Express employees in New York in May, automobile workers in Elmira and Detroit in May, furniture workers in Rockford, Ill., in May, phosphate miners in May, California shipbuilders in May, cigar makers in Tampa and

Chicago, building laborers in Chicago, Dallas, and Passaic, bakers in Chicago, shoe workers in New York and Massachusetts in May and June, longshoremen in April, textile workers in Providence in April, brass workers in Connecticut in June, city employees in Chicago in June, and the motormen and conductors on the Bay State Street Railway in June.

The data in the following tables relate to the 974 strikes and 42 lockouts reported to have occurred in the three months under consideration. A few strikes that occurred during the quarter but in which the exact month was not stated appear in a group by themselves.

STATES IN WHICH 10 OR MORE STRIKES AND LOCKOUTS WERE REPORTED AS OCCURRING DURING THE SECOND QUARTER OF 1919.

State.	April.		May.		June.		Month not stated.		Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	
Massachusetts.....	28	2	37	.....	44	.....	1	.....	110	2	112
New York.....	22	1	54	.....	83	.....	1	.....	110	1	111
Pennsylvania.....	28	.....	33	3	27	1	4	.....	92	4	96
Illinois.....	22	2	38	3	20	2	6	1	86	8	94
Ohio.....	18	.....	29	2	15	1	3	.....	65	3	68
Michigan.....	11	1	23	.....	7	1	1	.....	42	2	44
New Jersey.....	10	.....	16	.....	10	.....	7	.....	43	.....	43
Indiana.....	11	.....	12	1	9	1	1	.....	33	2	35
California.....	11	.....	11	.....	4	.....	3	.....	29	.....	29
Wisconsin.....	8	1	9	1	7	.....	3	.....	27	2	29
Connecticut.....	3	.....	6	.....	16	.....	1	.....	26	.....	26
Minnesota.....	5	.....	11	.....	4	.....	3	.....	23	.....	23
Texas.....	3	.....	4	2	9	1	3	.....	19	3	22
Washington.....	1	.....	13	.....	6	.....	.....	.....	20	.....	20
Iowa.....	6	2	3	.....	7	.....	1	.....	17	2	19
Missouri.....	5	.....	8	2	2	.....	1	.....	16	2	18
West Virginia.....	4	.....	7	1	4	1	1	.....	16	2	18
Rhode Island.....	5	.....	2	.....	10	.....	.....	.....	17	.....	17
Maine.....	4	.....	6	1	6	.....	.....	.....	15	1	16
New Hampshire.....	5	.....	7	.....	4	.....	.....	.....	16	.....	16
Oklahoma.....	2	.....	5	3	2	1	2	.....	11	4	15
Georgia.....	4	.....	5	1	3	.....	.....	.....	12	1	13
Nebraska.....	1	.....	5	.....	4	.....	2	.....	12	.....	12
Tennessee.....	4	.....	2	.....	2	.....	2	.....	10	.....	10
24 other States and Territories.....	25	2	44	1	34	.....	4	.....	107	3	110
Total.....	246	11	389	21	289	9	50	1	974	42	1,016

Of these disputes, 723 strikes and 25 lockouts occurred east of the Mississippi and north of the Ohio and Potomac Rivers; 177 strikes and 12 lockouts occurred west of the Mississippi, and the remaining 74 strikes and 5 lockouts south of the Ohio and Potomac Rivers and east of the Mississippi. In 21 strikes, union officials repudiated the action of the men in striking.

As to cities, New York City has the largest number of disturbances—37; followed by Chicago with 28, Detroit with 26, Boston with 17, Cleveland and Toledo with 13 each, and Omaha with 12.

As to sex, the distribution was as follows: Males, 771 strikes and 80 lockouts; females, 35 strikes and 2 lockouts; both sexes, 35 strikes; sex not reported, 133 strikes and 10 lockouts.

The industries in which 9 or more strikes and lockouts were reported are shown in the table which follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED AS OCCURRING DURING THE SECOND QUARTER OF 1919.

Industry or occupation.	April.		May.		June.		Month not stated.		Total.		Grand total.
	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	
Building trades.....	73	.....	83	2	40	2	4	.....	200	4	204
Metal trades.....	44	6	60	4	60	2	12	1	176	13	189
Textiles.....	16	1	28	.....	31	.....	3	.....	78	1	79
Clothing.....	18	.....	16	.....	20	1	3	.....	57	1	58
Miners.....	14	.....	20	.....	14	.....	3	.....	51	.....	51
Street railways.....	6	.....	11	1	10	.....	.....	.....	27	1	28
Telephone employees.....	7	.....	7	.....	10	.....	.....	.....	24	.....	24
Bakers.....	3	1	20	.....	.....	.....	.....	.....	23	1	24
City employees.....	2	.....	8	.....	13	.....	.....	.....	23	.....	23
Shipbuilding.....	8	.....	10	.....	4	.....	.....	.....	22	.....	22
Paper and paper products.....	1	.....	14	.....	5	1	1	.....	21	1	22
Electrical and gas supply.....	2	.....	8	3	3	.....	2	.....	15	3	18
Iron and steel.....	7	.....	4	2	3	.....	2	.....	16	2	18
Printing and publishing.....	1	.....	12	2	1	1	.....	.....	14	3	17
Waiters, cooks, and bartenders.....	3	.....	4	.....	8	.....	2	.....	17	.....	17
Teamsters and chauffeurs.....	.....	.....	4	.....	11	.....	.....	.....	15	.....	15
Carriage and auto workers.....	5	.....	5	1	2	.....	1	.....	13	1	14
Food handlers.....	5	.....	3	2	3	.....	1	.....	12	2	14
Lumber and timber.....	1	.....	9	.....	1	.....	2	.....	13	.....	13
Steam railways.....	2	.....	4	.....	5	.....	.....	.....	11	.....	11
Chemical workers.....	1	.....	4	.....	4	.....	1	.....	10	.....	10
Leather workers.....	1	.....	5	.....	3	.....	.....	.....	9	.....	9
Longshoremen.....	4	.....	4	.....	1	.....	.....	.....	9	.....	9
Tobacco workers.....	5	.....	1	1	2	.....	.....	.....	8	1	9
Miscellaneous.....	2	1	9	2	7	2	5	.....	23	5	28
Not reported.....	15	2	36	1	28	.....	8	.....	67	8	90
Total.....	246	11	389	21	289	9	50	1	974	42	1,016

Included in the above table are 38 strikes of carpenters, 37 strikes of painters, 32 strikes of machinists, 71 strikes and 1 lockout of molders, 13 strikes of tailors, 23 strikes and 1 lockout of bakers, and 43 strikes of coal miners.

In 535 strikes and 26 lockouts the employees were reported as connected with unions; in 18 strikes and 1 lockout they were not so connected; in 5 strikes they were not connected with unions at the time of striking, but joined immediately after; in 416 strikes and 15 lockouts the number was not reported.

In 568 strikes and 36 lockouts only one employer was concerned in each disturbance; in 21 strikes, 2 employers; in 16 strikes, 3 employers; in 7 strikes, 4 employers; in 8 strikes, 5 employers; in 212 strikes and 2 lockouts, more than 5; in 142 strikes and 4 lockouts the number was not reported.

In the 480 strikes for which the number of persons on strike was reported there were 498,447 strikers, an average of 1,038 per strike. In 117 strikes, in which the number involved was 1,000 or more, the strikers numbered 418,892, thus leaving 79,555 involved in the remaining 363 strikes, or an average of 219 each. By months the figures are as follows: April, 125,258 strikers in 113 strikes, average 1,108, of whom 15,728 were in 78 strikes of less than 1,000 persons each, average 202; May, 192,148 strikers in 193 strikes, average 996, of whom 39,436 were in 146 strikes of less than 1,000 persons, average 270; June, 174,466 strikers in 151 strikes, average 1,155, of whom 21,016 were in 117 strikes of less than 1,000 persons each, average 180.

The following table shows the causes of the strikes and lockouts in so far as reported. In about three-fourths of the disturbances the question of wages or hours was prominent and in nearly one-fourth the question of union recognition or existence was involved.

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED AS OCCURRING DURING THE SECOND QUARTER OF 1919.

Matter in dispute.	April.		May.		June.		Month not reported.		Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	
Increase in wages.....	75		124		101		6		306		306
Decrease in wages.....	7		10	1	4				21	1	22
Nonpayment of wages.....	3		3		1				7		7
Increase of hours.....			1						1		1
Decrease of hours.....	9		16		14				39		39
Increase of wages and decrease of hours.....	33	3	71	3	36	1	3		143	6	149
Recognition of union.....	15	1	19	5	13	3			47	9	56
Recognition and wages.....	6		6	1	11		2		25	1	26
Recognition and hours.....			2						2		2
Recognition, wages, and hours.....	8		11		7				26		26
Recognition and conditions.....	1				2				3		3
Conditions.....	9		10		10				29		29
Conditions and wages.....	1		3		5		1		10		10
Conditions and hours.....	1								1		1
Conditions, wages, and hours.....	1				2				3		3
Employees discharged.....	9		15		14		1		39		39
Discharge of objectionable persons.....	1		1		3				5		5
Nonunion men.....	2								2		2
Agreement.....			1		1				2		2
New agreement.....	5		6		4				15		15
Sympathy.....	5		13	1	6				24	1	25
Jurisdiction.....	2		2						4		4
Miscellaneous.....	6	1	19	4	7	5	34		66	1	76
Not reported.....	47	7	56	6	48		3	1	164	14	168
Total.....	246	11	369	21	289	9	50	1	974	42	1,016

It is frequently difficult to state exactly when a strike terminates, since many strikes end without any formal vote taken on the part of the strikers. The Bureau has information of the actual ending of 367 strikes and 13 lockouts during the quarter, besides 5 strikes and

1 lockout in which the positions of the employees were filled with practically no interruption in the work.

RESULTS OF STRIKES AND LOCKOUTS ENDING DURING THE SECOND QUARTER OF 1919.

Result.	April.		May.		June.		Month not stated.		Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	
In favor of employers..	7	1	7	-----	8	1	-----	-----	22	2	24
In favor of employees..	29	1	56	1	41	3	3	-----	129	5	134
Compromised.....	28	4	49	-----	32	1	3	-----	112	5	117
Employees returned pending arbitration..	9	1	16	-----	12	-----	1	-----	38	1	39
Not reported.....	24	-----	19	-----	23	-----	-----	-----	66	-----	66
Total.....	97	7	147	1	116	5	7	-----	367	13	380

In the table, which follows, the duration of 210 strikes and 8 lockouts is given. Besides these there were 48 strikes and 1 lockout for which the statement was made that the duration was short, and 157 strikes and 5 lockouts for which the duration was not reported.

DURATION OF STRIKES AND LOCKOUTS DURING THE SECOND QUARTER OF 1919.

Period.	April.		May.		June.		Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	
1 day or less.....	6	-----	7	-----	5	-----	18	-----	18
2 days.....	3	-----	5	-----	2	-----	10	-----	10
3 days.....	-----	-----	4	-----	2	-----	6	-----	6
4 days.....	6	-----	7	-----	5	-----	18	-----	18
5 to 7 days.....	2	-----	6	-----	6	-----	14	-----	14
1 to 2 weeks.....	5	-----	10	-----	7	-----	22	-----	22
2 to 3 weeks.....	6	-----	14	-----	6	1	26	1	27
3 to 4 weeks.....	5	-----	5	-----	4	-----	14	-----	14
1 to 3 months.....	20	3	24	-----	25	2	69	5	74
Over 3 months.....	6	1	3	1	4	-----	13	2	15
Total.....	59	4	85	1	66	3	210	8	218

The number of days lost in strikes ending during the quarter was 6,083. The average duration of these strikes was about 29 days. The average duration of strikes lasting less than 90 days was 23 days. By months the record is as follows: April, days lost 2,288, average 39 days; May, days lost 1,958, average 23 days; June, days lost 1,837, average 28 days. In the case of strikes lasting less than 90 days the average duration was 22 days in April, 18 in May, and 30 in March. In the 8 lockouts 1,464 days were lost.

IMMIGRATION.

Immigration in July, 1919.

THE following tables, prepared by the Bureau of Immigration of the Department of Labor, show the number of immigrant aliens admitted into the United States in each month from January, 1913, to July, 1919, and the number admitted in each fiscal year, 1915 to 1918, and in July, 1919, by nationality. The total departures of emigrant aliens in July, 1919, numbered 25,757.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, JANUARY, 1913, TO JULY, 1919.

Month.	1913	1914	1915	1916	1917	1918	1919	
							Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	24,745	6,356	9,852	¹ 8.8
February.....	59,156	46,873	13,873	24,710	19,238	7,388	10,586	7.5
March.....	96,958	92,621	19,263	27,586	15,512	6,510	14,105	33.2
April.....	136,371	119,885	24,532	30,560	20,523	9,541	16,860	19.5
May.....	137,262	107,796	26,069	31,021	10,487	15,217	15,093	¹ 10.5
June.....	176,261	71,728	22,598	30,764	11,095	14,247	17,987	19.2
July.....	138,244	60,377	21,504	25,035	9,367	7,780	18,152	.9
August.....	126,180	37,706	21,949	29,975	10,047	7,862	.....	.....
September.....	136,247	29,143	24,513	36,398	9,228	9,997	.....	.....
October.....	134,440	30,416	25,450	37,056	9,284	11,771	.....	.....
November.....	104,671	26,298	24,545	34,437	6,446	8,499	.....	.....
December.....	95,387	20,944	18,901	30,902	6,987	10,748	.....	.....

¹ Decrease.

Classified by nationality, the number of immigrant aliens admitted into the United States during specified periods and in July, 1919, was as follows:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN JULY, 1919, BY NATIONALITY.

Nationality.	Year ending June 30—					July, 1919
	1915	1916	1917	1918	1919	
African (black).....	5,660	4,576	7,971	5,706	5,823	614
Armenian.....	932	964	1,221	321	282	45
Bohemian and Moravian.....	1,651	642	327	74	105	19
Bulgarians, Serbian, Montenegrin.....	3,506	3,146	1,134	150	205	24
Chinese.....	2,469	2,239	1,843	1,676	1,697	155
Croatian and Slovenian.....	1,912	791	305	33	23	2
Cuban.....	3,402	3,442	3,423	1,179	1,169	196
Dalmatian, Bosnian, Herzegovinian.....	305	114	94	15	4	.....
Dutch and Flemish.....	6,675	6,433	5,393	2,200	2,735	325
East Indian.....	82	80	69	61	68	5
English.....	38,662	36,168	32,246	12,980	26,889	3,743
Finnish.....	3,472	5,649	5,900	1,867	968	85
French.....	12,636	19,518	24,405	6,840	12,598	1,891
German.....	20,729	11,555	9,682	1,992	1,837	232
Greek.....	15,187	26,792	25,919	2,002	813	115
Hebrew.....	26,497	15,108	17,342	3,672	3,055	315
Irish.....	23,503	20,636	17,462	4,657	7,910	988
Italian (north).....	10,660	4,905	3,796	1,074	1,236	277
Italian (south).....	46,557	33,909	35,154	5,234	2,137	816
Japanese.....	8,609	8,711	8,925	10,168	10,056	577
Korean.....	146	154	194	149	77	10
Lithuanian.....	2,638	599	479	135	160	46
Magyar.....	3,604	981	434	32	52	12
Mexican.....	10,993	17,198	16,488	17,602	28,844	3,711
Pacific Islander.....	6	5	10	17	6	.....
Polish.....	9,065	4,502	3,109	668	732	170
Portuguese.....	4,376	12,208	10,194	2,319	1,574	176
Roumanian.....	1,200	953	522	155	89	29
Russian.....	4,459	4,858	3,711	1,513	1,532	261
Ruthenian (Rusniak).....	2,933	1,365	1,211	49	103	15
Scandinavian.....	24,263	19,172	19,596	8,741	8,261	904
Scotch.....	14,310	13,615	13,350	5,204	10,364	1,363
Slovak.....	2,069	577	244	35	85	16
Spanish.....	5,705	9,259	15,019	7,909	4,224	405
Spanish-American.....	1,667	1,881	2,587	2,231	3,092	343
Syrian.....	1,767	676	976	210	231	37
Turkish.....	273	216	454	24	18	2
Welsh.....	1,390	983	793	278	608	101
West Indian (except Cuban).....	823	948	1,869	732	1,223	93
Other peoples.....	1,877	3,888	2,097	314	247	34
Total.....	326,700	296,826	266,408	110,618	141,132	18,152

PUBLICATIONS RELATING TO LABOR.

Official—United States.

CALIFORNIA.—*State Land Settlement Board. Information regarding progress under the Land Settlement Act and about the plans for soldier settlement in the future. Sacramento, May 30, 1919. 43 pp.*

A summary of this report is published on pages 280 to 282 of this issue of the MONTHLY LABOR REVIEW.

GEORGIA.—*Department of Commerce and Labor. Seventh annual report for the fiscal year ending December 31, 1918. Atlanta, 1919. 82 pp.*

A table in this report shows a total of 21,541 males and 16,196 females employed in the textile mills of the State in 1918. Of the total, 1,992, or 5.3 per cent, were children under the age of 16 years. The total amount of wages paid is also given, but there is no classification by occupation. Other tables in the report give similar data as to the most important industries in Georgia. In each case the monthly or weekly wage rates paid for certain groups of workers are given.

ILLINOIS.—*Health Insurance Commission. Report. Springfield, May 1, 1919. 647 pp.*

A digest of this report appears on pages 267 to 272 of this issue of the MONTHLY LABOR REVIEW.

LOUISIANA.—*Department of Education. Aims and needs in Negro public education in Louisiana. By Leo M. Favrot. [New Orleans.] September, 1918. 26 pp.*

The purpose of this bulletin is "to discuss frankly our present attitude toward Negro public education in Louisiana, to present briefly special needs in Negro education, and to formulate aims and principles to guide us as a State, and to guide our parish superintendents and school boards in working out this problem." It is to be followed by a second pamphlet presenting some suggestive plans for the organization of a parish Negro school system and pointing out sources of possible aid in building up such a system.

MARYLAND.—*State Board of Labor and Statistics. Twenty-seventh annual report, 1918. Baltimore, 1919. 306 pp.*

States that during 1918 there were filed with the State Industrial Accident Commission 42,570 reports of industrial accidents, resulting in 5,005 claims for compensation, of which 163 were claims arising from the death of the employee. The total number of accidents during the year not resulting in claims was 120,930. The amount accrued or reported paid during the year was \$252,982.93, and the total outstanding on specific awards was \$511,006.31, making the total benefits \$763,989.24. During the year there were 37 strikes in the State, an increase of 20 over 1917 and of 22 over 1916. Of the strikes, 10 were successful, 4 partly so, 22 were unsuccessful, and 1 remained unsettled at the end of the year. The State mining inspector reports 4,190,236 tons of coal mined, an increase of 233,655 tons, or 5.9 per cent, over 1917. There were 48 prosecutions under the child-labor law, with convictions in 29, or 63 per cent, of the cases.

MASSACHUSETTS.—*Minimum Wage Commission. Wages of women employed in canning and preserving establishments in Massachusetts. Boston, March, 1919. 51 pp. Bulletin No. 19.*

This report was noted on pages 250 and 251 of the MONTHLY LABOR REVIEW for September.

MINNESOTA.—*Department of Education. The new chance for the disabled man or woman. A description of the work of the division of reeducation and placement of injured persons established by chapter 365, laws 1919. St. Paul, 1919. 10 pp.*

NEW YORK.—*Report to Gov. Alfred E. Smith, by Jeremiah F. Connor, Moreland Act commissioner, on the State insurance fund of the State of New York. May 27, 1919. Albany, 1919. 18 pp.*

A digest of the report was printed in the September issue of the MONTHLY LABOR REVIEW, pages 306-325.

NEW YORK (CITY).—*Department of Health. Monthly Bulletin. New York City, May, 1919. pp. 113-136.*

Contains an article on Felt-hat making by the acid-nitrate-mercury method and the no-nitrate method, which is noted on pages 237 and 238 of this issue of the MONTHLY LABOR REVIEW.

PENNSYLVANIA.—*Department of Labor and Industry. Bulletin, vol. 6, No. 1, series of 1919. Harrisburg, 1919. 277 pp.*

This issue of the Bulletin contains industrial accident statistics for the year 1918, and a brief digest of appears on pages 232 and 233 of this issue of the MONTHLY LABOR REVIEW.

— *Insurance Department. Bituminous coal-mine fatalities in Pennsylvania, 1914-1918. [Harrisburg] July, 1919. 28 mimeographed pages. 2 charts.*

A brief digest of this report appears on pages 233 and 234 of this issue of the REVIEW.

PHILIPPINE ISLANDS.—*Bureau of Education. Nineteenth annual report of the director of education, 1918. Manila, 1919. 195 pp. Illustrated.*

Includes sections on Agricultural activities of the public schools, and Industrial instruction.

UNITED STATES.—*Council of National Defense. An analysis of the high cost of living problem. Washington, 1919. 23 pp.*

The report contains the findings of the Reconstruction Research Division, Council of National Defense, which indicate that the high cost of living is primarily due to curtailment of production and hoarding of food products, profiteering, and inflation of circulating credit, and that the situation may be most advantageously met by stimulated production, readjustment of incomes, repression of hoarding and profiteering, improvement of methods for distribution and marketing, and the perfecting of means of keeping the Nation informed regarding probable requirements of the more important commodities.

Statistics on which the findings are based, relating to production, storage, prices, wages, etc., are shown.

— *Woman's Committee. Department of women in industry. Report. Conference of departments of women in industry of the Middle West State divisions, Hull House, Chicago, September, 13-14, 1918. Washington, 1918. 30 pp.*

— *Department of Commerce. Bureau of Foreign and Domestic Commerce. Wholesale prices on leading articles in United States markets, January, 1917, to December, 1918. Washington, 1919. 14 pp. Miscellaneous series, No. 80. Price, 5 cents.*

— *Bureau of Standards. New forms of instruments for showing the presence and amount of combustible gas in the air, by E. R. Weaver, associate chemist, and E. E. Weibel, associate physicist. Washington, June 23, 1919. 90 pp. Scientific papers, No. 334. Price, 15 cents.*

In the spring of 1916 an investigation was begun by the Bureau of Standards into some of the forms of gas detectors in use, and as none of the existing forms was found suitable for all purposes, the investigation led to the design of several new forms which are more reliable or better adapted to certain uses than the old ones. This pamphlet is devoted to a description of these new forms.

UNITED STATES.—*Department of Commerce. Bureau of the Census. Census of electrical industries: 1917. Telegraphs and municipal electric fire-alarm and police-patrol signaling systems. Washington, 1919. 61 pp.*

Under telegraphs a section gives statistics concerning employees, salaries, and wages. Of the 51,574 employees of all kinds, both salaried and wage earning, of all systems, 47,227, or slightly more than nine-tenths, were reported by the land lines, and the salaries and wages paid these employees amounted to \$36,392,140. Of the 31,297 wage earners, 28,224, or about nine-tenths, were reported by the land lines, and their wages amounted to \$21,834,570. Operators constituted 21,639, or 69.1 per cent of the wage earners for all systems, 71.5 per cent of the total number of wage earners for land lines, and 47.1 per cent of the wage earners for ocean cables. Female operators constituted 22.3 per cent of the operators employed on land lines and 11.6 per cent of those employed on ocean cables.

— — — *Municipal markets in cities having a population of over 30,000: 1918. Washington, 1919. 56 pp.*

A municipal market as the term is used in this report is defined to be a "place designated by the city for use by a number of persons for marketing food products under municipal supervision. * * * The supervision may range from the complete control exercised by a city official with a corps of assistants, to casual observation by the policeman on whose beat the market is located * * *." The report covers the organization, classes of employees, areas and buildings, rentals, and methods of operation of markets; revenues, costs, valuations, and indebtedness.

— *Department of the Interior. Bureau of Education. An educational study of Alabama. Washington, 1919. 522 pp. Bulletin No. 41.*

Report of a commission appointed for the purpose of making a study of the public educational system of Alabama, including all schools and educational institutions supported in whole or in part from public funds, to determine the efficiency of the same, and to report its findings, with recommendations for increased efficiency and economy.

— — — *Education in Italy, by Walter A. Montgomery. Washington, 1919. 29 pp. Bulletin No. 36.*

A review of Italy's school system, emphasizing the changes wrought by the war. The most striking advance in the field of Italian education during the past two years has been the establishment of the "scuole popolari" from plans submitted by the Minister of Industry, Commerce, and Labor, and the Minister of Public Instruction. These schools, constituting a "bridge between the elementary and the vocational and technical schools," bring to rural children who have, through financial reasons, been unable to continue in school, scientific and vocational advantages hitherto obtainable only in schools of higher grade. Successful hospital classes in elementary subjects were carried on for wounded soldiers in the various hospitals by public school teachers and by volunteers. The program for educational reform urged by a commission appointed to study the needs of the present educational system is thoroughly up-to-date and includes among its provisions the following:

The thorough execution of all school laws and the overhauling of the national financial system to this end.

The raising of the minimum salary of teachers to 3,000 lire (\$600) and the investing of the teaching profession with enhanced moral and social prestige.

The lengthening of the school year and the requirement of the teacher to take part in civic and communal tasks.

The fixing of the final leaving age of pupils at 18 years.

The establishment of compulsory schools for illiterate adults up to 45 years.

The establishment, on the application of communal authorities, of popular courses, schools of hygiene and sanitation, languages, etc.

The subordination of the national budget to the needs of popular education, and not vice versa.

The paying of greater attention to woman's place in the national life, with especial regard to the needs of peasant and laboring women.

UNITED STATES.—*Department of the Interior. Bureau of Education: Education in Switzerland, 1916-1918, by Peter H. Pearson. Washington, 1919. 26 pp. Bulletin No. 38.*

— *Department of Labor. Children's Bureau. Administration of child-labor laws. Part 3: Employment-certificate system—Maryland, by Francis Henry Bird and Ella Arvilla Merritt. Washington, 1919. 127 pp. Charts. Industrial series No. 2, part 3. Bureau publication No. 41.*

In 1915, in Maryland, approximately 27,000 boys and girls between 10 and 16 years of age, or nearly 18 per cent of the total number of the children in the State, are said to have been at work. About 12,000, or nearly 45 per cent of these, were engaged in occupations not subject to any legal regulation, such as farm work, domestic service, and other occupations not specifically enumerated in the child-labor law. Some 13,000, or approximately 48 per cent of the number at work, were engaged in occupations for employment in which they were required by law to obtain some form of certificate from the State. This study describes the laws relating to employment certificates in effect on December 1, 1917, and the system of administration existing at that time. Since the completion of the study certain changes have been made in the laws relating to employment certificates. Briefly summarized the certificate law requires as adequate proof as is now practicable that a child going to work is of legal age; fixes for a child permitted to work throughout the year an education standard, which, though low, is as high as that of many other States; and by providing for physical examinations upon entering an occupation or changing from one occupation to another, demands that he be safeguarded from working in occupations for which he is not physically fit. According to the report the most important changes needed for the protection of working children are: Issuance of all certificates throughout the State under such direct supervision by the board of labor and statistics as will insure the strict enforcement of the age, educational, and physical standards set by law; uniformity throughout the State in school-attendance requirements for children of school age and educational standards for leaving school; cooperation between the certificate-issuing officials and the school authorities in the eastern counties; appointment of a larger number of inspectors and certificate-issuing officials; provision for insuring their competency; and adequate support of child-labor and compulsory education laws of all magistrates before whom prosecutions are brought.

— — — *Standards of child welfare. A report of the Children's Bureau conferences, May and June, 1919. Washington, 1919. 459 pp. Conference series No. I. Bureau publication No. 60.*

Proceedings of a conference on child-welfare standards held under the auspices of the Children's Bureau as the conclusion of its children's year program and attended by authorities on matters relating to child welfare from foreign countries and all parts of the United States. The first conference was held at Washington, May 5, 1919, and this was followed by regional conferences held in eight cities. As a whole they represent perhaps the most conspicuous single attempt to state what contemporary civilization has learned concerning the welfare of childhood. This volume contains the principal papers read at the Washington conference and a few of the more significant contributions made in the regional conferences, also quotations from discussions following the papers. While divergence of views as to method are presented by different authorities, marked agreement is expressed upon the great essentials of child-welfare policy. At the end of the Washington conference, tentative child-welfare standards were agreed upon, printed, and distributed for discussion by the regional conferences, and a committee was named to revise them in the light of criticisms and suggestions which might be received from the later conferences and from other interested citizens and associations. These standards form section 6 of the present volume and include minimum standards for children entering employment, for the public protection of the health of children and mothers, and for the protection of children in need of special care. The other sections are devoted to the economic

and social basis for child welfare standards; Child labor: Legislative prohibition of employment, legislative regulation of employment, vocational guidance and placement; The health of children and mothers; Children in need of special care; and Standardization of child-welfare laws.

An account of the Washington conference, including the text of the Minimum standards for children entering employment was printed in the June, 1919, issue of the MONTHLY LABOR REVIEW, pp. 216-220, and the pamphlet containing the entire text of the minimum standards for child welfare submitted by the congress was noted in the July, 1919, issue, page 287.

UNITED STATES.—Department of Labor. *Employment and natural resources. Possibilities of making new opportunities for employment through the settlement and development of agricultural and forest lands and other resources, by Benton MacKaye.* Washington, 1919. 144 pp. Illustrations. Maps.

This report is the result in part of a general investigation of land as an opportunity for securing employment for returning soldiers and other workers, which, in accordance with general instructions from the Secretary of Labor, was begun in the autumn of 1915. The plan outlined has been quite fully set forth by the author in articles which appeared in the MONTHLY LABOR REVIEW for January, 1918 (pp. 48-56), and April, 1919 (pp. 121-139).

— *Letter from the Secretary of Labor transmitting information relative to the connection of certain of the Department's employees with the case of Thomas J. Mooney.* 2 pamphlets. Washington, July 23, 1919. 90, 68 pp. House Doc. No. 157.

— *Federal Board for Vocational Education. Training courses in safety and hygiene in the building trades.* Washington, May, 1919. 128 pp. Bulletin No. 31. Trade and industrial series No. 6.

Aims to form the basis of definite instruction in safety and hygiene as applied to the building trades. While the bulletin is intended primarily for use in vocational schools, it is also meant to be of use to employers who wish to promote safety methods and practices among their employees.

— *Federal Trade Commission. Food investigation. Report on the meat-packing industry. Summary and Part I; Part III, Methods of the five packers in controlling the meat-packing industry.* Washington, June 24, 28, 1919. 574, 325 pp. Maps.

— *Report on leather and shoe industries.* Washington, 1919. 180 pp.

The report covers the years 1914 to 1918 and contains chapters on The hide market; Costs and profits of tanners; Costs and profits of shoe manufacturers; Margins and profits of shoe dealers; and on General conditions in the leather and shoe industries and conclusions of the commission.

It is shown that the prices of hides have increased greatly during the period covered and that the five large meat packers are in a position largely to control the price of hides, both domestic and imported; that the great advance in the price of leather "could not be justified by the cost of producing it"; that the cost of manufacturing shoes increased greatly, "but not to an extent that warranted the prices at which manufacturers sold their product; that the absolute margins of profit taken by retail dealers per pair of shoes grew wider as their costs of shoes increased"; and that as a result of these unprecedented profits the public had to pay prices that could not be justified.

Measures suggested for relief from the intolerable prices are (1) a rigid enforcement of the laws against monopolistic control of commodities, (2) legislation forbidding producers of hides engaging in the tanning business, and (3) the adoption of a device in the distribution of shoes that will acquaint the consumer with the selling price of the manufacturer.

— *National War Labor Board. Memorandum report of the Secretary as to the work of the board for the 12 months ending May 31, 1919.* Washington, 1919. 16 pp.

The greater portion of this report was reprinted in the MONTHLY LABOR REVIEW for August, pages 262-270.

UNITED STATES.—*President. The cost of living. Address, delivered at a joint session of the two Houses of Congress, August 8, 1919. Washington, 1919. 14 pp.*

— *Railroad Administration. Women's Service Section. Number of women employed and character of their employment, for dates of Jan. 1, Apr. 1, July 1, Oct. 1, 1918. (Class I roads) Eastern, Southern, and Western territories, by roads. Washington, 1919. 36 pp.*

This report was noted in the MONTHLY LABOR REVIEW for September, pages 259-261.

— *Shipping Board Emergency Fleet Corporation. Industrial Relations Division. Education and training section. The training of shipyard workers. Report. Philadelphia, April 20, 1919. 88 pp.*

This report points out the conditions under which effective training on a large scale can be conducted, and shows the relation between costs and training results.

— *Shipbuilding Labor Adjustment Board. Decision as to wages, hours, and other conditions in Pacific coast shipyards, October 1, 1918. Washington, 1918. 23 pp.*

The text of this decision of the so-called Macy board, including the wage scale in full, was printed in the MONTHLY LABOR REVIEW for December, 1918, pages 197-212.

— *Report on electric welding and its applications in United States of America to ship construction, by Capt. James Caldwell. Philadelphia, 1918. 418 pp.*

— *Treasury Department. Public Health Service. Program of the Public Health Service intended especially to meet after-the-war needs. Washington, 1919. 8 pp. Supplement No. 35 to Public Health Reports, May 9, 1919.*

This pamphlet is briefly noted on page 241 this issue of the MONTHLY LABOR REVIEW.

Official—Foreign Countries.

CANADA.—*Bureau of Statistics. Directory of the chemical industries in Canada as of date January 1, 1919. Ottawa, 1919. 68 pp.*

The directory represents the first report of a special industrial survey of Canadian chemical industries made by the Bureau of Statistics at the request of the Honorary Advisory Council for Scientific and Industrial Research. It forms a section of the annual industrial census. It includes a list of all concerns engaged in the production of chemicals, either as main products or as by-products; and concerns in which any of the processes used are essentially dependent on the agency of chemical change. The first part is arranged alphabetically by concerns, and the second by chemical products manufactured. The remaining report of the survey will contain data regarding raw materials used, products and by-products manufactured, imports and exports, and other information.

FRANCE.—*Ministère du Travail et de la Prévoyance Sociale. Direction du Travail. Travaux des Commissions mixtes Départementales pour le maintien du travail national. Volume V. Avis sur les modalités à envisager pour que la démobilisation s'effectue dans les conditions les plus favorables à la reprise de l'activité économique. Paris, 1918. 180 pp.*

The Minister of Labor issued a circular on November 13, 1917, inviting departmental committees of representatives of employers and workmen and of employers' and workmen's organizations of France to study and suggest methods for demobilization most favorable for the resumption of normal economic life after the war. This volume contains the minutes of the sessions, the findings, and resolutions of 64 of these mixed commissions, together with an analysis of the plans suggested. An appendix gives the plan submitted by the Statistique Générale de la France for France, and a résumé of plans proposed in Great Britain and Germany for those respective countries. Earlier volumes of this series were noted in the MONTHLY REVIEW for September, 1916, p. 104, and February, 1917, p. 307.

GREAT BRITAIN.—*Civil Service Commissioners. Sixty-third report, 1918. London, 1919. 37 pp. Cmd. 214. Price, 3d net.*

— *Department of Scientific and Industrial Research. Medical Research Committee. Reports of the Industrial Fatigue Research Board. No. 2: The output of women workers in relation to hours of work in shell making. London, 1919. 23 pp. Price, 6d. net.*

A summary of this report appears on pages 217 to 219 of this issue of the MONTHLY LABOR REVIEW.

— — — — — *No. 3: A study of improved methods in an iron foundry. London, 1919. 8 pp. Price, 2d. net.*

Gives an account of the results of introducing efficiency methods in an iron foundry in Derby. In 1915 the proprietor began to introduce motion study, shorter hours, systematic training, and higher rates of pay for increased output, with the result that output was increased to an enormous degree. This increase is not estimated for the whole foundry, but individual instances are given.

A job which before the war gave an average output of 48 per day of 10 hours was standardised under the new system at an output of 147 per day of 8½ hours. This meant an increase in hourly output by nearly 284 per cent, an increase which was regularly surpassed by trained adult workers.

The proprietor attributed his success largely to his having secured the friendly cooperation of his workers before introducing the new system. He consulted them before taking any steps towards a change, and, if at any time complaints arose, announced his willingness to go back to the old system if they desired it. At the outset he decreased hours from 54 to 48 per week, and gave each worker a standard day wage, about 25 per cent higher than the rates prevailing in the district, until such time as his output under training increased to a point where he could make more as a pieceworker. Varying the usual practice, the rate per piece was increased as the output increased. Naturally enough under these circumstances the workers did not wish to go back to the longer hours and lower wages of the old system.

No indication could be found that the workers suffered more fatigue under the new than under the old system, in spite of the greater output. The favorable result is looked upon as a complex of many factors.

How much of the increase in output and economy of effort is to be apportioned to systematic training, to organization, and improved efficiency of material, to shorter hours, or to better food arising from higher wages, it is impossible to determine * * *. Movement study must itself result in a better organization and efficiency of material; and without the restful effects of shorter hours and the inducements offered by a better system of payment, movement study and training can have no chance of appreciable success.

— *Home Department. Committee on the Police Service. Report. Part I. London, 1919. 29 pp. Cmd. 253. Price, 3d. net.*

This committee was established several months ago for the purpose of inquiring into and reporting upon the condition of unrest which had existed for a considerable time among the police, not only in the metropolis, but in other parts of the country as well, with the hope of allaying the discontent and putting matters upon a more satisfactory footing. The present report deals principally with certain questions of organization, pay, housing arrangements and rent aid, and certain general conclusions on the subject of pensions. Questions remaining to be dealt with in future reports include those of recruiting, training, discipline, promotion, leave, and medical arrangements, and other questions relating to pensions, the grouping of police authorities for purposes of control, and the merging of the smaller borough forces into the county forces.

— *Laws, statutes, etc. Manuals of emergency legislation. Supplement (No. 2), May 10, 1919, to food supply manual. London, May, 1919. 133 pp. Price, 2s. net.*

GREAT BRITAIN.—*Local Government Board. Housing. Schemes submitted by local authorities and public utility societies. London, 1919. 52 pp. Cmd. 217. Price, 3d, net.*

Under the reconstruction housing program of the British Government extended financial assistance is being given by the Government to local governing bodies and limited dividend companies to increase the supply of houses. On June 1, 1919, 1,936 schemes had been submitted to the local Government Board from 660 local governing bodies and 36 limited dividend or public utility societies. The estimated area to be developed is about 25,000 acres. Sites covering 9,916 acres and providing for 5,201 houses have been approved. The sites submitted for approval will provide sufficient space for 250,000 dwellings.

— *Ministry of Labor. Appointments Department. A record of opportunity as to careers and training. Revised to November, 1918. London, 1918. 408 pp.*

A handbook compiled for the use of serving officers, ex-officers, and civilians who consult the Appointments Department of the Ministry of Labor in regard to their resettlement in civil life.

— — *Report of the committee of inquiry into night work in the bread baking and flour confectionery trade. London, 1919. 44 pp.*

This report is noted more fully on pages 147 to 149 of this issue of the MONTHLY LABOR REVIEW.

— — *Interim report of the committee of inquiry into the scheme of out-of-work donation. London, 1919. 6 pp. Cmd. 196. Price, 1d. net.*

This committee was appointed "to make inquiries and report with regard to the out-of-work donation scheme instituted in November, 1918, and extended in February, 1919, and to make recommendations as to any modifications that may be desirable in the scope and administration of the existing scheme." Pending the issuance of its final report, the committee submits several recommendations for immediate action relating to the following: (1) Inquiries from the last employer of the applicant for donation; (2) payment of donation to workpeople on short time; (3) concurrent payment of out-of-work donation and disability pensions; (4) part-time workers; (5) procedure in prosecutions for fraud; (6) use of employment exchanges by employers; (7) requirements of 20 weeks' employment in 1918; and (8) disqualification for donation.

— *Ministry of Pensions. Committee on Artificial Limbs. Report. London, May 20, 1919. 12 pp. Price, 6d. net.*

— *Ministry of Reconstruction. Reconstruction problems 32. Poor law reform. London, 1919. 24 pp. Price, 2d.*

— — *Reconstruction problems 33. Child welfare. London, 1919. 28 pp. Price, 2d*

— — *Report of advisory council committee on local reconstruction organizations. London, 1919. 16 pp. Cmd. 136. Price, 1d. net.*

— *National Health Insurance Joint Committee. Medical Research Committee. Alcohol: Its absorption into and disappearance from the blood under different conditions, by Edward Mellanby. London, 1919. 48 pp. Special report series No. 31.*

Description of experiments undertaken at the request of the chairman of the Central Control Board (Liquor Traffic) to supply certain information in order that the policy of controlling the sale of liquor might be guided and assisted by the results of scientific inquiry. The information requested included such problems as the effect of dilution on the intoxicating properties of alcohol, the modifying action, if any, of foodstuffs at different stages of digestion on alcoholic intoxication, variations in the effects of beverages imbibed, etc.

GREAT BRITAIN.—*The King's Fund. [Constitution and rules.] London, 1919. 7 pp.*

A pamphlet giving the constitution and officers of the King's fund, and the rules for its administration. This fund was established for the purpose of assisting disabled

officers and men and the dependents of deceased officers and men to reinstate themselves in business. It is not its purpose to relieve the State of any of its legitimate responsibility to the men disabled in the war, but rather to bridge a gap in after-care arrangements for which the State could not make provision.

— *Treasury. Committee on recruitment for the civil service after the war. Civil service. Recruitment after the war. 1st-3d interim reports, and final report. February 28, May 17, October 30, 1918, and April 22, 1919. London, 1919. 6, 5, 7, 15 pp. Cmd. 34, 35, 36, 164.*

The final report is noted on pages 219 to 221 of this issue of the MONTHLY LABOR REVIEW.

— *War Cabinet Committee on Women in Industry. Report. London, 1919. 341 pp. Cmd. 135. Price, 1s. 6d.*

This report was noted in the MONTHLY LABOR REVIEW for September, pages 262-271.

— (MANCHESTER).—*Director of education. Parental neglect and juvenile crime. Manchester, Deansgate, January, 1919. 38 pp.*

Sets out the results of a searching inquiry instituted into 100 of the cases of juvenile offenders dealt with by the Manchester City magistrates during 1915, in consequence of the disclosures made in a pamphlet entitled "Juvenile crime," which made obvious the fact that many children in Manchester were compelled to live under social conditions highly conducive to crime. The present inquiry covers Culpability of parents; Social conditions: A. Income. B. Rent. C. Number in family. D. Amount per head after rent is paid. E. Statement of average findings for 100 cases; Housing; Home neglect; Physical condition of children; Mental retardation of physically neglected children; Human documents; and Conclusion.

— (SCOTLAND).—*Local Government Board. Twenty-fourth annual report, 1918. Edinburgh, 1919. lxiv, 44 pp. Cmd. 230. Price, 6d. net.*

Of especial interest to labor are the sections on Housing and town planning, Old-age pensions, and Unemployed Workmen Act.

INDIA.—*Department of Statistics. Statistics of British India. Vol. V. Education, 1917-18. Eleventh issue. Calcutta, 1919. 260 pp. Price, 2 rupees and 4 annas or 3s. 6d.*

NETHERLANDS.—*Departement van landbouw, handel en nijverheid. Overzicht van de Verslagen der Kamers van arbeid over 1917. The Hague, 1919. 133 pp.*

Constitutes the annual summary of the reports of the individual councils of labor in the Netherlands. These bodies, organized under the act of May 2, 1897, are composed of equal members of employers and employees. They are organized locally for several trades or for a single trade. Their functions consist in the collection of information on labor conditions, formulating expert opinion and advice on labor matters, and prevention of labor disputes by processes of conciliation and arbitration. On January 1, 1919, there were 81 so-called councils of labor in existence.

NEW ZEALAND.—*Board of Trade. Report on the coal industry. Wellington, May 20, 1919. 108 pp. Illustrated.*

Report of members of the Board of Trade appointed to inquire into and report upon the following matters: The present cost of the production and distribution of coal in New Zealand; any increases in the cost of such production or distribution since the commencement of the war, and the causes of such increases; whether the profits made in the production and distribution of coal are fair and reasonable; whether the selling prices of coal are fair and reasonable; whether increased economy or efficiency can be obtained in the production and distribution of coal, and, if so, in what respects and in what manner; all other matters affecting the supply or price of coal; the increases since the commencement of the present war in the cost of living so far as such increases affect men engaged in the production of coal, distinguishing between

increases, if any, prior to and subsequent to the industrial agreements made in the coal industry in the year 1917; and the increases since the commencement of the war in the earnings of men engaged in the production of coal, distinguishing between increases, if any, prior to and subsequent to the said industrial agreements.

NORWAY.—*Riksforsikringsanstalten. Ulykkesforsikringen for industriarbeidere m. v. 1916. Christiania, 1919. 35* 96 pp. Norges Officielle Statistik, VI: 152.*

Comprises the report of the operations of the Norwegian State industrial accident insurance system for the year 1916. The following table is a brief summary of those operations for the period 1895 to 1916:

STATISTICAL EXPERIENCE OF NORWEGIAN INDUSTRIAL STATE INSURANCE SYSTEM, 1895 TO 1916.

Year.	Number of establishments.	Number of full-time workers.	Amount of wages paid.	Receipts from premiums.		Expenditures.		Compensated accidents.			Accident rate (per thousand full-time workers).
				Total.	Per cent of wages	Total.	Per cent of wages.	Total.	Disability.	Deaths.	
1895-1908.....	1,472,189	331,876,227	\$5,166,181	15.57	\$5,697,770	17.17	46,378	31,865	1,129	31.5	
1909.....	19,998	144,425	35,699,871	531,918	14.90	561,549	15.73	5,609	3,866	136	38.8
1910.....	19,655	150,771	37,771,501	569,092	15.07	647,369	17.14	5,875	3,986	119	39.0
1911.....	20,984	160,809	41,063,989	624,902	15.22	769,725	18.74	7,564	5,020	138	47.0
1912.....	21,581	173,783	45,537,923	756,200	16.61	755,948	16.60	8,808	6,183	116	50.7
1913.....	22,819	183,343	49,610,403	830,886	16.75	810,225	16.33	8,849	6,903	127	48.3
1914.....	22,668	184,268	50,768,597	855,549	16.85	851,316	16.77	8,697	7,257	129	47.2
1915.....	23,551	189,243	53,372,061	983,398	18.43	931,469	17.45	9,080	7,612	206	48.0
1916.....	28,077	208,058	58,695,547	1,104,902	18.82	1,025,670	17.47	13,930	13,219	179	67.0
1895-1916.....	2,866,889	704,396,119	11,423,028	16.22	12,051,041	17.11	114,790	85,911	2,279	40.0	

Unofficial.

ALMANACH NATIONAL. *Annuaire officiel de la Republique Française pour 1915-1919. (217^e a 221^e années) Paris, Berger-Levrault, 1919. 1418, 24 pp.*

The French National almanac for the years 1915 to 1919.

AUSTIN, OSCAR P. *Prices, yesterday, to-day, and to-morrow. New York, The National City Bank, 1919. 16 pp.*

An address by the statistician of the National City Bank of New York before the editorial conference of the New York Business Publishers' Association, New York, April, 1919.

BENNETT, CHARLES A. *Proposed plan for a school of trades for Rio de Janeiro, Brazil. Peoria, Ill., The Manual Arts Press, 1918. 56 pp. Brochures on industrial education.*

The plan presented in this report was prepared upon request of the mayor of the city of Rio de Janeiro, acting through the Brazilian ambassador to the United States. The report covers facts concerning the industries of Brazil which have been considered in preparing the plan, the scope of a school of trades suited to the needs of the capital of Brazil, types of curricula to be offered, considerations regarding the planning of the building, the organization of the school, and other matters.

BOOTH, MEYRICK. *Social Reconstruction in Germany. London, 1919. 86 pp. Price, 1s. net.*

A study aiming to throw some light on a few of the main tendencies in social reconstruction in Germany. The study is largely based on recent German literature which is copiously quoted by the author. It is divided into five chapters, viz, (1) Social developments during the war; (2) education; (3) the family; (4) guild socialism; and (5) social ideals.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE. *Division of economics and history. Preliminary economic studies of the war, No. 12. Disabled soldiers' and sailors' pensions and training, by Edward T. Devine, assisted by Lilian Brandt. New York, Oxford University Press (American branch), 1919. 471 pp.*

Consideration is given to disabled men in civil life, to current developments in Great Britain, Canada, France, Germany and Austria, and the United States, and to various phases of the restoration of disabled men which are involved in the new programs.

CITY AND SUBURBAN HOMES COMPANY. *Twenty-third annual report of the president, May, 1919. New York, 1919. 9 pp.*

This company is engaged in the building and management of improved homes for wage earners. It houses over 15,000 persons in its various properties. The company has \$7,185,914 invested in buildings and has authorized capital stock to the amount of \$6,000,000, of which \$4,191,530 has been issued. A table giving the distribution of its tenants by occupation, shows that mechanics represent the largest number (506, or 17.2 per cent), while domestics (484, or 16.4 per cent) and unskilled workers (325, or 11 per cent) follow next in the order named.

DESPLANQUE, JEAN. *Journée légale et après-guerre. Paris, Attinger Frères, 1918. 74 pp.*

This book on The legal day after the war is an argument for a legal 10-hour day both in Paris and in the Provinces of France.

ESTEY, HELEN GRACE. *Cost of living in the United States, bibliography. Boston, 38 St. Stephens Street, 1919. 16 pp. Price, 50 cents.*

Bibliography published in Special Libraries, November-December, 1918, revised and brought up to date.

FARMERS' COOPERATIVE WHOLESALE FEDERATION (N. Z.) LIMITED. [*Organization and functions.*] Wellington, N. Z., Dominion Farmers' Institute Building, 1919. 35 pp.

The functions of the federation, which comprises 11 associations and 62 branches of associations, are stated to be: "1. To purchase and arrange for transport of the requirements of the member associations and their branches, although neither the associations nor the federation confine their operations to trade with members, and in placing their exclusive agency with the federation, manufacturers are assured of the widest distribution of their goods. 2. To transport and dispose of in other countries New Zealand primary products. 3. To act as agents for steamship and other companies desiring efficient representation in New Zealand. 4. To link up with other cooperative organizations in furtherance of the objects of the federation, and generally to act in the interests of member associations as circumstances from time to time necessitate." The pamphlet describes in detail its organization, functions, and facilities.

FEISS, RICHARD A. *A national labor policy. An address delivered before the Economic Club of Boston on April 15, 1919. Boston, 1919. 10 pp.*

A consideration of the subject from the standpoint of the manager, the importance of scientific management being frequently ignored, according to the author, in discussions of labor problems. In any effective national labor policy he thinks the public must be represented and mentions two methods by which such representation has been suggested: (1) That the social scientist, "the men from our universities, who are dealing with the arts and sciences, are the people who should represent the people," and (2) "that the public should be represented, in the case of any one industry, in relation to its particular questions with labor, by a proper representation of the other industries, because the industries and the members of those industries are accustomed to deal with economic affairs in a practical way, and are also large consumers."

FRANK, GLENN. *The politics of industry: A footnote to the social unrest.* New York, The Century Co., 1919. 214 pp.

A survey of "some of the outstanding policies, methods, and instruments used or proposed for the administration of industry—collective bargaining, strikes, lockouts, injunctions, conciliation, arbitration, investigation, social legislation, welfare work, profit-sharing, and scientific management." The author says: "At the end of this survey * * * the thing that stands clear is that no one, or all of these combined, will succeed in shifting the administration of industrial relations from the present balance of power basis. These can not be considered as solutions; they fail to touch the ultimate labor issue—the status of the worker in industry and his relation to the control of industry." His hope for such a solution lies in the belief that "between the extreme forms of State socialism and the extreme forms of private capitalism there exists an intermediate region of industrial self-government." He considers the principles laid down in the Whitley report the best expression so far reached of a basis for practical action on the lines of such self-government, and devotes considerable space to a consideration of the report. The text of the report is contained in an appendix, as is also the text of a letter addressed by the British Minister of Labor to the leading employers' associations and trade-unions, October 20, 1917.

GLASS FACTORY DIRECTORY. *List of factories in the United States and Canada grouped by States. Class, character of ware, and capacity indicated.* Pittsburgh, 1919. 116 pp. Price, \$2.

GOMPERS, SAMUEL. *Why the peace treaty should be ratified. American labor's reasons for supporting the League of Nations covenant with its labor provisions.* Washington, 1919. 8 pp.

HENDERSON, ARTHUR. *International labor standards.* London, Wesleyan Methodist Social Welfare Department, 1 Central Buildings, Westminster, SW. 1, 1919. Price, 2d. "Pioneer" Pamphlets, No. 1.

HITCHENS, E. L. *Wages and prices.* Norwood, Ohio, 3918 Regent Avenue, 1919. 7 pp. *The good and welfare series pamphlet No. 1.* Price, 5 cents.

An argument for a changed monetary system, based on tables showing the disparity between the increase in prices of certain commodities and the increase in wages in certain occupations between the years 1898 and 1919.

HOSPITAL MANAGEMENT. Chicago, The Crain Publishing Co., August, 1919. 104 pp.

Contains summary of a pamphlet entitled "The case for shorter hours in hospital schools of nursing," published by the committee on education of the National League of Nursing Education, in which an argument is presented for an eight-hour day in hospitals. Articles of special interest in the industrial department include one by B. J. Curry on the system of physical examination used by the American Thread Co. for the purpose of determining the fitness of an employee for a particular kind of work and by W. T. Corbusier, safety engineer of the Long Beach Shipbuilding Co., on a "unit hospital" for industrial plants. The latter contains a plan and layout suggested as a standard type to be used for hospitals of industrial plants. The plan is based upon the latest design of hospital in operation at the Long Beach Shipbuilding Co. yards.

INDUSTRIAL RECONSTRUCTION COUNCIL. *Lectures. Higher wages and shorter hours, by Lord Leverhulme. (May 28, 1919.) 15 pp.; International unity, by George J. Wardle. (Jan. 8, 1919.) 10 pp.; The economic limits of nationalization, by George Cockerill. (May 14, 1919.) 14 pp. The responsibility of trade-unions in relation to industry, by J. R. Clynes. (Feb. 19, 1919.) 15 pp.* London, Tudor Street, EC., 1919.

JOURNAL OF INDUSTRIAL AND ENGINEERING CHEMISTRY. New York, American Chemical Society, 35 East Forty-first Street, August 1, 1919. 717-812 pp.

Of interest to labor are an article on Efficiency and productivity of wage and salary earners in the chemical industries—an attempt to obtain an answer, by O. P. Hopkins, and a note on Skin diseases from certain lubricants, by Charles Baskerville.

JOURNAL OF INDUSTRIAL HYGIENE. Vol. I, No. 5. New York, The Macmillan Co., September, 1919. pp. 215-260, 63-82.

"A practical study in industrial fatigue" as the title of an article by Henry C. Link which described a study undertaken at the request of a large manufacturing concern in order to determine certain facts regarding the effects of fatigue on the work of shell inspection. "A study of 50 workers in trinitrotoluene," by Tracy Jackson Putnam and William Herman, gives the result of a study of partially selected men engaged in purifying and packing the material at a plant on the Atlantic slope, during September, 1918, undertaken for the purpose of determining more exactly the symptoms of poisoning by the chemical, and its usual path of absorption and pharmacological action, as a step toward the early diagnosis and prevention of its harmful effects upon those handling it. "Protective garments in the war gas industry" describes one of the effective means by which operatives in the production and handling of war gases were so successfully protected that "although hundreds of tons of war gases were being produced by processes entirely new, and in the hands of men quite inexperienced in these particular manufacturing problems, the fatalities attributable to the war gases could be numbered on the fingers of one hand, and the temporary casualties were proportionately small in number." Other articles in this number are on Syphilis, an inestimable factor in industrial inefficiency, by Edward A. Oliver; Toxemic anemia from arseniuretted hydrogen gas in submarines, by Sheldon F. Dudley; and Industrial medicine and surgery—a résumé of its development, scope and benefits—Part II, by Harry E. Mock. The last article is summarized on pages 235 to 237 of this issue of the MONTHLY LABOR REVIEW.

KENT, A. F. STANLEY. *Industrial fatigue. A lecture given on April 26, 1919. Manchester, College of Technology, 1919. 9 pp.*

The author, who is director of the department of industrial administration, College of Technology, Manchester, states it as his opinion that "the hope of industry in the future lies in a right understanding of the nature, the causes, the results, and the prevention of industrial fatigue." As to the results, he says that they are appreciated to-day as never before in the history of industry; "in two words, it limits output." The lecture concludes with a discussion of what may be regarded as a reasonable limit of hours of labor, and the relation of industrial accidents to fatigue.

— *Industrial fatigue and efficiency. Paper read at the annual autumn congress of the Textile Institute at Preston, October 12, 1917. Manchester (England), The Textile Institute, 1917. Reprinted from the Textile Institute Journal, December, 1917. 15 pp.*

LABOR PARTY (GREAT BRITAIN). *Report of the executive committee, presented to the Nineteenth annual conference, Southport, June 25, 27, 1919. London, 33 Eccleston Square, SW. 1, 1919. 142 pp.*

MALCOLM, M. VARTAN. *The Armenians in America. Boston, The Pilgrim Press, 1919. 142 pp. Illustrated.*

A sketch of the history, life, and activities of the Armenians in the United States. According to a chapter devoted to the Armenians in industry, since 1899, 55,057 Armenians have been admitted into the United States. Of these, 14,020 were skilled workmen representing 49 kinds of trades; 1,281 were farmers; 782 were professional men, teachers, lawyers, doctors, clergymen, engineers, artists, and writers; and 1,161 were merchants, manufacturers, bankers, and agents. While Armenians have settled in nearly every State in the Union, 90 per cent are located in New York, Massachusetts, Rhode Island, Connecticut, Pennsylvania, Illinois, Michigan, Wisconsin, and California. In the New England States they work in the shoe factories, iron foundries, machine shops, and woolen mills. Almost the entire colony in Troy, N. Y., is engaged in the shirt and collar industry; in Paterson and West Hoboken, N. J., they are employed in the silk mills; in New York City, in various occupations; in Pennsylvania, in mills, factories, and the bituminous coal mines; and in the cities of the

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Middle West they work in iron and steel shops, automobile and furniture manufacturing, and in slaughterhouses. Large numbers in California, especially the colony in Fresno County, are employed in agriculture. There is an introduction by Hon. James W. Gerard and a preface by Leon Dominian.

MERCHANTS' ASSOCIATION OF NEW YORK. *Special committee on housing. Report, including a discussion of the continuance of present high prices.* New York, 1919. 23 pp.

This report deals only with the question of the immediate cause of the housing shortage in New York City. Two factors, in the opinion of the committee, delay the construction of houses: (1) Lack of money for building operations, and (2) Reluctance to build while prices are high, coupled with doubt as to the continuance of high prices. To encourage investment in real estate mortgages the committee considers exemption of mortgage returns from income taxation as the most important remedy. High building costs will probably continue, it is stated.

MERON, FREDERIC. *Manufacturer's instructor and adviser.* Nos. 1-3. New York, Theo. Audel & Co., 72 Fifth Avenue, 1918. 3 vols. 228, 161, and 351 pp. Plates.

MERRITT, WALTER GORDON. *Factory solidarity or class solidarity?* New York, 135 Broadway, 1919. 63 pp. Reprint from the *Iron Age*.

An argument in support of works committees.

METROPOLITAN LIFE INSURANCE COMPANY. *The welfare work of the Metropolitan Life Insurance Co., for its industrial policy holders. Report for 1918, by Lee K. Frankel.* New York, 1919. 15 pp.

The report of the nursing service testified to the effect of nursing and the distribution of welfare literature on the company's mortality by the following figures: During 1917 there was an average increase in mortality over that prevailing in 1911 of 2.5 per cent at the ages of 65 and over and of 2.1 per cent at the ages 15 to 19. Aside from these, all other ages showed a decline in mortality during the seven-year period. Special attention is paid to maternity nursing, with the result that the company's mortality from diseases relating to childbirth declined 8.1 per cent in seven years, whereas the mortality in the registration area increased 3.8 per cent. The report covers data concerning Instruction of the policyholder and the members of his family in matters of health; Cooperation with health authorities and social agencies in improving health conditions; Industrial service bureau; The Framingham demonstration; Sanitary survey of New Orleans; Allotments and allowances for soldiers' families; Exhibits; Picnics; and Health and Happiness and veteran leagues.

NATIONAL ASSOCIATION OF EMPLOYMENT MANAGERS. *Proceedings of the first annual convention, May 21-23, 1919.* Newark, N. J., C. Wolber Co., 1919. 148 pp.

In addition to a brief historical sketch of the National Association of Employment Managers this volume includes the daily discussion of such subjects as: Functions and scope of the employment department; Employment office methods; Relations of the employment office with foremen and other executives; Placing the returned soldier; Training and place of the disabled industrial worker; Employer, employee, and the public; Stabilizing the working force; Profit sharing, insurance, bonus; Organizing the working force; Human relations department from the standpoint of the industrial physician, and others.

NATIONAL GUILDS LEAGUE. *The guild idea: An appeal to the public.* London, 1919. 15 pp. Pamphlets of the National Guilds League, No. 2. Price, 2d.

— *National guilds or Whitley councils? Being a reprint, with a new introduction, of two pamphlets entitled: "Observations on the Whitley report," and "Notes for trade-unionists on the Whitley reports."* London, 1919. 20 pp. Price, 3d.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Interim report of the European Commission.* Boston, July 19, 1919. 34 pp.

A digest of this report appears on pages 18 to 21 of this issue of the MONTHLY LABOR REVIEW.

NATIONAL SAFETY COUNCIL. *Safe practices, No. 26. Manila and wire rope.* Chicago, 1919. 16 pp. Illustrated. Price, 25 cents.

NATIONAL UNION OF GAS WORKERS AND GENERAL LABORERS OF GREAT BRITAIN AND IRELAND. *Approved society (130). Minutes of annual general meetings.* 1st, 2d, 5th; 1913, 1914, 1917. 15, 11, 3 pp.

— — Secretary's report to the annual general meetings. 3d, 4th; 1915, 1916. 4 pp., 8 pp.

NATIONAL UNION OF GENERAL WORKERS. *Approved Society (130). Secretary's report to the sixth annual general meeting, 1918.* London, 1918. 4 pp.

NEW JERSEY STATE CHAMBER OF COMMERCE. *Bureau of State Research. A sound policy for municipal pensions.* Newark, May, 1919. 24 pp.

This report is noted on pages 272 and 273 of this issue of the MONTHLY LABOR REVIEW.

NORTH LONDON MANUFACTURERS ASSOCIATION. *Industrial unrest, with some practical suggestions for its alleviation. Being the report of a joint committee of employers and employed appointed at an open conference of manufacturers and representatives of organized labor held on 9th February, 1919.* London, 1919. 37 pp. Price, 1s.

This is the final report of the joint committee appointed at the conference of February 9, 1919, which was convened "in the hope of achieving thereby more harmonious cooperation between capital and labor." The committee's terms of reference were: To define the obstacles to more cordial relations between employers and employed; to suggest means which could be adopted for the removal of these obstacles; and to consider if any immediate steps could be taken as the result of the suggestions made. This report was to be submitted to a further conference to be convened for that purpose. Appendixes contain a summarized report of the proceedings at the conference held on February 9, 1919; an interim report by the committee; and reports to the committee by a subcommittee appointed on April 1, 1919, to consider the agreed causes of industrial unrest and to suggest remedies—in the form in which it was subsequently adopted by the main committee.

PEDDLE, JOHN B. *The construction of graphical charts. Second edition, revised and enlarged.* New York, McGraw-Hill Book Co. (Inc.), 1919. 158 pp. Illustrated.

This edition contains a new chapter on the use of determinants.

ROBERTS, GEORGE E. *Causes underlying the social unrest.* New York, The National City Bank, 1919. 22 pp.

An address by the vice president of the National City Bank of New York before the Iowa bankers' convention, Fort Dodge, Iowa, June 24, 1919.

ROWNTREE, ARNOLD S. *The 1918 Education Act explained.* London, The Athenaeum Literature Department, 1918. 12 pp.

This act was reviewed in the MONTHLY LABOR REVIEW for December, 1918, pp. 42-46.

ROWNTREE, B. SEEBOHM. *Social obligations of industry to labor. A lecture given in the department of industrial administration, College of Technology, Manchester, on November 12, 1918.* Manchester (England), College of Technology, 1919. 20 pp.

The duties which employers owe to the workers in return for their cooperation in the industrial enterprise on which both are jointly engaged are considered under two heads: (1) The obligation of securing for them satisfactory material conditions; and (2) creating in the factory a tone and atmosphere which will encourage every worker to be and to do his best. Of material conditions, the weekly wage is placed first in importance. According to detailed estimates based on prices ruling in 1914, the author arrives at 35s. 3d. (\$8.58) as the minimum wage which would enable a man to maintain a family of five in accordance with a minimum standard of comfort; and 20s. (\$4.87) as the minimum wage for a woman. He believes that the principal source to which employers must look for increased wages is increased efficiency in the organization and administration of industrial enterprises. Second to wages in importance are hours of work, regarding which the author thinks "we ought to aim at a working week of

not more than 48 hours." Universal and compulsory unemployment insurance and a large increase in the present unemployment benefit of 7s. (\$1.70) he advocates as "not a Utopian policy."

RUSSELL SAGE FOUNDATION. *Library. Industrial hygiene. New York, 130 East Twenty-second Street, August, 1919. 4 pp. Bulletin No. 36.*

A selected bibliography of the literature relating to industrial hygiene arranged under the headings of General, Conference proceedings, and Official publications: Federal, State, city.

SOCIÉTÉ DE LÉGISLATION COMPARÉE. *Annuaire de Législation Française, contenant le text des principales lois votées en France en 1917. Trente-septième année. Paris, Librairie Générale de droit et de Jurisprudence, 1918. 402 pp.*

The twenty-seventh annual of French legislation published by the Society for Comparative Legislation contains the text of the principal laws passed in France in 1917.

SOCIETY OF COMPARATIVE LEGISLATION. *Journal of comparative legislation and international law, edited by Sir John Macdonell and C. E. A. Bedwell. London, July, 1919. 206 pp. Third series, vol. 1, part 2.*

Contains reviews of the principal legislation enacted in 1917 throughout the British Empire, as well as in France, Holland, Sweden, and the United States.

STUART, EDWARD O. *Food and money. Delivered at the meetings of Group Five, Arkansas Bankers Association, Conway, Ark., March 19, 1919, and Group Nine, Illinois Bankers Association, Collinsville, Ill., June 11, 1919. St. Louis, 1919. 19 pp.*

The author believes in abundant production of necessities as a potent solvent of unrest and says, "There are too many people engaged in the manufacture and marketing of those things we do not have to have, and too few engaged in producing those things we do have to have." "The theory," he says, "is not to increase credit, but to divert part of it from the production of luxuries into the production of essentials until the latter reach a proper proportion to the former, which will occur when the mass of people find themselves in position to supply their essential wants."

TRANSVAAL CHAMBER OF MINES. *Twenty-ninth annual report for the year 1918. Johannesburg, 1919. 534 pp.*

TRAVELERS STANDARD. Vol. VII, No. 5. Hartford, Conn., The Travelers Insurance Co., May, 1919. pp. 81-116. Illustrated.

Contains an article on putting disabled men on the pay roll, which gives an account of various means for assisting disabled men to become industrially skillful, including appliances of prosthesis, mechanical devices, and methods of special instruction. There is also an article on accident prevention in war time.

UNIVERSITY OF OKLAHOMA. *Social problems. Norman, Okla., 1918. 156 pp. Bulletin. New series No. 157. University extension series No. 44.*

VEBLEN, THORSTEIN. *The vested interests and the state of the industrial arts. New York, B. W. Huebsch, 1919. 183 pp.*

This volume is made up of papers which have already appeared, in a slightly abridged form, in the Dial, under the caption "The modern point of view and the new order." Their aim is "to show how and, as far as may be, why a discrepancy has arisen in the course of time between those accepted principles of law and custom that underlie business enterprise and the businesslike management of industry, on the one hand, and the material conditions which have now been engendered by that new order of industry that took its rise in the late eighteenth century, on the other hand; together with some speculations on the civil and political difficulties set afoot by this discrepancy between business and industry."

WARREN, J. BROADFIELD. "The redemption of the disabled." A review of the book of that title by Garrard Harris, of the research division of the Federal Board for Vocational Education. New York, 1919. 78 pp.

WILKINSON, K. E. T. *A guide to the Education Act, 1918.* London, *The Athenaeum Literature Department*, 1919. 2d ed. 116, iv pp.

Characterizing the Education Act, 1918, as of equal importance in the educational history of England and Wales as are the acts of 1870 and 1902, the author emphasizes the fact that it is remarkable also for the absence of the religious or sectarian controversies which have wrecked other education bills. A discussion of the different sections of the act brings out the most important improvements effected by the act. The sections dealing with the employment of children are summarized briefly and clearly. A copy of the act itself with explanatory notes immediately following the portion explained comprises a large part of the text. The book as a whole is, as the name implies, a guide to the Education Act, and furnishes an excellent reference for a detailed study of it.

WOOD, EDITH ELMER. *The housing of the unskilled wage earner: America's next problem.* New York, *The Macmillan Co.*, 1919. 321 pp. *American social progress series.*

This book furnishes a summary of the housing movement up to the time of the war. It is a compilation of facts and policies in housing. Such value, therefore, which the book possesses is brought out by a statement of its principal contents: Housing conditions in the United States; Restrictive housing legislation in the United States; Model housing in the United States under private initiative; Experience of foreign countries; Beginnings of constructive housing legislation in the United States; Objections to constructive housing legislation in the United States; and Outline of a comprehensive housing policy for the United States.

YORKVILLE BANK, NEW YORK CITY. *Profit-sharing plan for the employees of the Yorkville Bank, New York, August, 1919.* 7 pp.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION. *War work council of the national board. Industrial committee. Research section. Industrial standards. A statement prepared for study and discussion at the industrial councils of the Young Women's Christian Association, June, July, and August, 1919.* New York, 600 Lexington Avenue, 1919. 6 pp.